

The Basilicas of Ethiopia

AN ARCHITECTURAL HISTORY



Mario Di Salvo

I.B. TAURIS

SHOUT
SHARE IT



The Basilicas of Ethiopia



Mario Di Salvo

The Basilicas of Ethiopia

AN ARCHITECTURAL HISTORY

in collaboration with Carolyn Gossage

With a Foreword by Professor Michael Gervers

I.B. TAURIS

LONDON · NEW YORK

Published in 2017 by
I.B.Tauris & Co. Ltd
London • New York
www.ibtauris.com

Copyright © 2017 Mario Di Salvo
Copyright Introduction © 2017 Michael Gervers

The right of Mario Di Salvo to be identified as the author of this work has been asserted by the author in accordance with the Copyright, Designs and Patents Act 1988.

All rights reserved. Except for brief quotations in a review, this book, or any part thereof, may not be reproduced, stored in or introduced into a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher.

Every attempt has been made to gain permission for the use of the images in this book. Any omissions will be rectified in future editions.

References to websites were correct at the time of writing.

ISBN: 978 1 78453 725 8
eISBN: 978 1 83860 931 3
ePDF: 978 1 83860 932 0

A full CIP record for this book is available from the British Library
A full CIP record is available from the Library of Congress

Library of Congress Catalog Card Number: available

Designed by Simon Goggin

Dedication

To the memory of our beloved friend, the
late Mariena Mondelli Montadon

Acknowledgements

Grateful thanks are extended to the Fondation Carlo Leone et Mariena Montandon as well as to Mario Mondelli and his son Massimiliano Mondelli in particular, for their generous support in bringing this publication to fruition. In addition, the valued contributions of Professor Michael Gervers of the University of Toronto and Father Emmanuel Fritsch CSSP have greatly enhanced the contents of this volume. Special recognition is also extended to Steven Piccolo for his work on the Italian–English translation of the original text, and to the photographer Ken Jones of the University of Toronto Scarborough Campus. Copious thanks as well to my indispensable collaborative author Carolyn Gossage and to Michael Brookes Gossage for his moral support and the countless hours spent at his printer.



Contents

Foreword by Professor Michael Gervers	vi	PART III	93
Author's Note	x	The Architecture of the Medieval	
		Basilicas of Ethiopia	
		(The Twelfth-Century Zagwe Kingdom	
		and the Restoration of the Solomonic	
		Dynasty)	
Preface – The Structural Characteristics of Christian Basilicas	xiii		
PART I	15	Basilicas Constructed in Caves	97
The Ruins of the Ancient Aksumite			
Basilicas (Fourth–Seventh Century)		The Monolithic and Semi-Monolithic Basilicas in Lalibalā	113
PART II	33		
The Architecture of the Late-		The Last Ethiopian Basilicas	128
Aksumite and Post-Aksumite			
Basilicas of Tigray (Eighth–Twelfth		Glossary	140
Century)			
		Bibliography	141
The Built Basilicas	37		
The Hypogeal Basilicas	63		
The Semi-Monolithic Basilicas	80		

Foreword

The basilica, as described here by the architect Mario Di Salvo, is symbolic of the history of Christianity in Ethiopia. Early evidence from the sixth and seventh centuries survives only in the form of ground plans of the churches excavated by archaeologists over the past century. All have been found in what was then the ancient kingdom of Abyssinia, a fertile highland territory bounded by the Danakil Depression and the Red Sea to the east, the deserts of Nubia and the Sudan to the north and west, and at its furthest extent the River Takkazē to the south. Nothing is known about church building during the two previous centuries beyond fifteenth- and sixteenth-century references to, and descriptions of, the large, five-aisled church of Maryam Šëyon, destroyed in 1535, which modern scholarship tends to attribute to the first Christian king of the Aksumite Empire, Aizana (c.330–70). An enduring spiral of economic decline set in about the middle of the seventh century, continuing until the late twelfth century, but it is during this time that a small handful of extant churches are increasingly thought to have been built, or hewn from the rock. Frequently cited are the rare surviving built churches of Āgawo Qirqos, Dabra Dāmo, and Zarēmā Giyorgis in Tigray and the Eritrean churches of Dabra Libānos and Asmara Endā Māryām, destroyed only in the last century. Apparently contemporary are the so-called ‘*églises de vallée*’ of Dēgum, Māryām Barāqit and Hawzēn Takla Hāymānot, all small, rock-hewn and positioned near each other in the Hawzēn Plain. These examples and a few others serve as the limited repertory of primary sources for understanding and analysing the many extant rock-cut and occasional externally built churches belonging to the twelfth to fifteenth centuries. One may imagine that during that four-hundred-year period, hundreds if not thousands of churches built in the open appeared across the landscape of a slowly expanding Christian kingdom; however, all but a few have collapsed under the elements, or been destroyed in times of strife.

A remarkable group of survivors are those churches constructed in caves starting, it is now believed, in the mid thirteenth century with the Zagwe church of Yēmrehanna Krēstos, and ending in the fifteenth century with the Solomonic church of Žammadu Māryām.¹

To all intents and purposes, the rectangular-shaped church disappears from Ethiopia south of Tigray in the early sixteenth century. It was replaced by the rotunda with a square, centrally located sanctuary, possibly inspired by the Church of the Holy Sepulchre in Jerusalem and the aedicule over the grotto from which Christ is said to have risen.² No explanation has yet been found as to why this significant change in architectural form occurred at the time it did, and so rapidly that when Miguel de Castanhoso visited the country in 1541–43, he noted that ‘These churches are round, with a holy place in the centre, and all around outside are verandahs.’³

If Ethiopia’s tradition of building or hewing out basilica churches endured from the fourth through to the fifteenth centuries, and even to the present day, it is not to say that all churches were basilicas according to Di Salvo’s definition; that is, that they be rectangular in shape with a clerestory allowing light into the nave, and oriented with the sanctuary at the east end. While the early built churches which remain standing generally fit this description, for equally practical reasons, the rock-hewn examples tended to be ‘hypostylic’ in nature.

The majestic Tigrayan triad of semi-monolithic churches, ‘Abreḥā-wa-‘Aṣbēha, Mikā’el ‘Ĕmbā and Wēkro Qirqos follow, and in size surpass, their externally built basilican counterparts. There are many others, described in this volume, which correspond to the definition, but there are more still, dating especially to the fourteenth century and thereafter, which were chiselled out with flat ceilings of equal height across nave and aisles. As Di Salvo has pointed out, there are no obvious lines of progression to assist the architectural historian in determining accurately which church preceded or succeeded which. Nevertheless, it is recognized by all that given the small number of surviving basilicas built before the end of the fifteenth century, one must turn to the rock-hewn examples of all sorts to reconstruct a more comprehensive repertory of architectural forms and features; they in turn can assist in setting out a relative chronology. A case in point is the introduction of the monolithic altar, which appears to have been an innovation of the fourteenth-century rock-hewn church.

An outstanding question in this context is whether all the rock-hewn churches as we know them today were created before c.1500, or whether there was a rock-cut tradition which persisted into the sixteenth century and thereafter. It would be surprising, especially in those areas such as Tigray and Lasta where the tradition was particularly strong, that the making of rock-hewn churches should suddenly have come to a halt. What certainly declined was the quality of workmanship; there are numerous church sites that are small, rough-hewn and coarsely finished, and not even rectangular in shape, which could have been chiselled out at any point and by craftsmen inexperienced in stone masonry.

Recent work sponsored by the Arcadia Foundation in the UK has identified numerous sites, especially in Tigray, where the hewing of rock churches is being carried out today. One contemporary craftsman, Giday Yiheyish, is responsible for five of them in the Hawzēn area alone. Of the five, three are enlargements of apparently ancient rock-hewn sites, which had either suffered from collapse, or additional sacred space was required for a growing community.

In all cases, Giday was engaged to carry out the work by local village committees who drew up written contracts stipulating the extent of the work to be accomplished and its remuneration. He, as master craftsman, would engage up to eight workmen, the youngest often being from the village and without prior training, while others would have worked with him previously. After excavating an initial 4 m by 4 m square, he would leave the others to complete the job, an undertaking involving the removal of approximately 17 m by 17 m by 5 m of rock at a rate of 40 cm by 1 m per man per eight-hour day; that is, some 1,445 cubic metres. The job, including periodic delays while funding was being secured and time out for the day labourers to fulfil their agricultural obligations at home, could be expected to take approximately five years. The wait is quite acceptable to the villagers, who pay less than they would for a church built on open ground, and can be assured that no maintenance will be required for possibly as much as a thousand years!

When not chiselling into a sandstone cliff, Giday's official occupation is that of a farmer. He applied the carving techniques he had learned from his father, who

was a woodworker, to stone, but otherwise had no previous training in the craft. His only tools were hammers of various sizes and chisels made commonly from rebars (steel rods used in reinforced concrete). Measurements are made by eye, and are based on hand and lower-arm lengths; the tape measure is rarely used. Ladders are also absent since excavation is usually from the top down and the sand which falls away serves as a temporary and stable ground.

The last stage in the process is the removal of the sand. The results are a far cry from the polished workmanship exhibited in such ancient churches of the neighbourhood as 'Abrēhā-wa-'Aṣbēha and Dēgum, indistinguishable in their detail from built structures, but the interior space created, with pillars and arches, is considerable. They are, in fact, not that different in appearance from the many others dotting Ethiopia's highland landscape, which, although believed to have been made more than half a millennium ago, may belong instead to any time since.

One of the outstanding questions to be approached in the Arcadia project, therefore, is whether the rock-cut churches being produced in Ethiopia today represent continuity from the past, or are a revival. If the former, we may be obliged to reconsider the current fluctuating chronology attributed to these often successful attempts to reproduce the traditional basilica form, while at the same time remembering that what we see today may be quite different from the way these churches appeared in their original incarnation.

In rock-cut architecture, the final stage by the very nature of the work obliterates what preceded it. Among the uncertainty presented by appearances in rock-hewn ecclesiastical architecture, we may therefore applaud Mario Di Salvo for his accurate tracing of the true basilica form from its inception to encompass the full spectrum of Ethiopian church history. This book is the key to our understanding of the entire repertory.

¹ Gervers 2014: 25–64.

² Fritsch, forthcoming.

³ Castanhoso: 90.

Michael Gervers

Toronto, February 2016

Author's Note

The analysis presented here addresses only those Ethiopian churches which feature the typical plan and vertical structural framework that belong to the 'basilica' typology, whether they have been constructed on open ground, within the confines of a cave, or are hypogeal, monolithic or semi-monolithic, and also regardless of their dimensions. In fact, there has been no attempt in this analysis to provide any evidence of their relative scale.

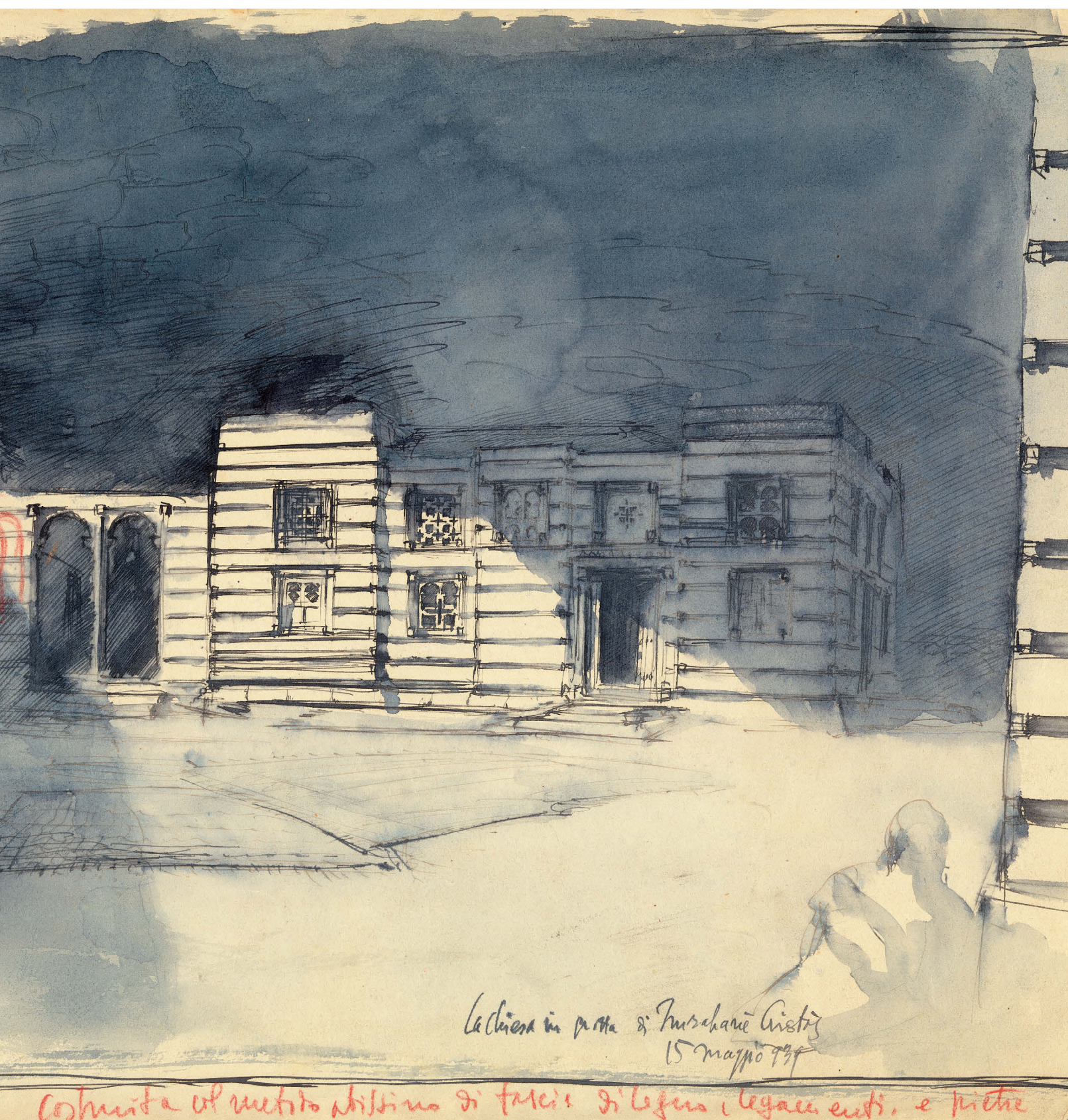
Indisputably there are many other churches which follow a similar ground plan, based on the basilica composition. Similarities in layout are also found in a number of hypogeal or even monolithic churches, although it would perhaps be more accurate to classify these as 'hypostylic', i.e. spaces with a flat roof supported by rows of columns or pillars.

From an architectural point of view, despite the existence of numerous and valuable analyses of various structures or groups of structures, a systematic comparison of the modifications that, over time, have come to characterize the basilicas of Ethiopia up to and including those of the fifteenth century can, it is hoped, offer some new observations as well as insights for further investigation into the evolution of this particular typology.

Of necessity this investigation would be accompanied and enhanced by specific contributions from other disciplines that brought in external documentary evidence, from philological, historical, literary, artistic and liturgical sources. The last of these, in particular, can offer the possibility of interpreting the progressive functional and ritualistic modifications that have periodically been introduced within the liturgies of these particular basilicas.

As far as gaining a thorough understanding of Ethiopia's basilicas goes, a comprehensive examination of these historic structures based on authentic documentation would constitute a unique attempt to consolidate a substantive array of related historical, liturgical and scholarly sources.





Lino Bianchi Barriviera. The church of Yēmrēhanna Krēstos built in a cave. May 15, 1939. Indian ink and watercolor on paper, 344 x 470 mm.
Bruna Bianchi private collection, Rome (Photo Archivio Fondazione Benetton Studi Ricerche, Treviso).

It should be noted, however, that the architectural changes and modifications introduced over the centuries did not occur in a linear fashion. Rather, these were marked by identifiable intervals, sometimes of progress, sometimes of reversion to past models, depending on prevailing conditions. In fact, the existence of such changes can provide invaluable insights into the evolutionary process that characterized the emergence of the basilicas of Ethiopia and the adaptations that arose from a marked diversity of geographical location and regional conditions.

In any event, although scholars have often based their chronological hypotheses on the assumption that the painted decorations located within the basilicas are contemporary with their construction, where painted decorations do exist they can only provide us with a distinctly provisional point of reference. In many instances, supplementary investigation indicates that these decorative features are not necessarily from the same period as the construction and were, in fact, subject to frequent modifications and revisions. Yet further determining factors which must also be taken into account are the periodic shifts in political conditions within the communities for which the basilicas had originally been constructed.

A major impediment to research *in situ* is the fact that, at times, it is impossible to make a thorough first-hand examination of the sites in question, or even to gain physical access to a number of these ancient basilicas, because they are still in use and thus subject to the sacred respect imposed by the depth of Christian religiosity within Ethiopia. In certain cases experience in the field must of necessity be supplemented with the study of sources which have in the past garnered and reproduced more thorough documentation. To this end, the results of the surveys of Elio Zacchia published by Augusto Monti Della Corte and translated into etchings by Lino Bianchi Barriviera are of great value, as are those of J. Gire published by Claude Lepage and Jacques Mercier.

Preface

The Structural Characteristics of Christian Basilicas

Since the dawn of civilization, humankind has endeavoured to immortalize his existence through the creation of a variety of recognized, proven architectural forms. It is, in fact, precisely through careful analysis of the historical heritage of buildings and the interpretation of structures and their functional aspects that it is possible to retrieve the architectural prototypes that constitute the common matrix of a multiplicity of structures. In particular, despite existing affinities or differences, the basilica has remained relatively homogeneous, both in terms of its structure and its function.

The Roman basilica, used as a place of public assembly (*porticus publica*), demonstrates the great flexibility of this typological matrix, and its openness to innovations. From this basic basilica form those early Christian structures that bear its name were undoubtedly derived, not in the sense of an almost uninterrupted transposition of late imperial types, but of a radical adaptation of those types to the needs of the Christian faith.

It is precisely the identification and interpretation of lines of typological development, according to the success or otherwise of the marriage between the matrix of the basilica model and its elaboration, that determined subsequent mutations. Certain adaptations were required to establish a spatial hierarchy, with an area set aside for celebrants and members of the clergy – to which only they were granted access – and an area for the congregation of believers. Other characteristics came about as episodic elements, or where pre-existing elements were presented in a different manner.

The Christian basilica should thus be regarded as an original entity, despite its historical connection with the Roman basilica. Its basic elements in relation to liturgical requirements¹ were defined quite rapidly.

The basilicas of Ethiopia, regardless of the time and conditions specific to each location, were configured as a quadrangular hall oriented longitudinally to form an axial route that extended gradually from the main entrance to culminate at the east

end in the apse, from where the rays of the rising sun – *ex oriente lux* – could penetrate through an opening in the middle of the sanctuary.

This gave rise to a perspective marked by the placement of parallel colonnades, dividing the space itself into three or, at times, five naves, specifically due to the need to cover an area whose size might well be too great for the load-bearing capacity of the roofing materials. The rows of columns or pillars, connected by architraves or arches, longitudinally subdivided the naves and functioned as support for the impost walls of the roof of the central nave. This, in turn, was raised above the lateral aisles to permit, with the creation of windows – i.e. the clerestory – the provision of natural lighting for the spaces situated at the greatest distance from the ambient sources of light.

Galleries are often found placed above the lateral aisles (accessed by means of a staircase placed inside the narthex), which were originally structurally conceived principally to withstand the lateral thrust of the roof of the central nave. Many well-founded questions remain today regarding the use of these balcony levels,² which are the same length as the naves below them and – at times – also serve as a means of connection extending along the internal surface of the main facade.³

One important and recognized variation of the basilica typology is formed by the crosswise placement of a transept at right angles to the longitudinal arrangement of the basilica.

In the hierarchy of the various areas within the basilica, determined by their respective functions, the naves were designed to welcome the faithful, who gained access from the front (usually through a narthex at the front of the basilica) or alternatively using side entrances, with distinct and specific purposes, at the first bays.

The sacred rituals were performed towards the eastern part of the basilica, thus determining both its practical and its symbolic characteristics. The area of the presbytery set aside for the performance of liturgical procedures generally extended out into the main nave at a higher level than that of the remaining naves (*solea*), and was also formally set apart by means of elements of separation such as a balustrade (*pluteus*). At the same level, introduced by a triumphal arch, was an area reserved for the Eucharistic rites.

Two specific areas (the *pastophoria*) were situated flanking the sanctuary: the *prothesis*, to the north, in which the offerings for the Holy Communion were stored, and the *diaconicon*, to the south, an area which was set aside for the storage of vestments, furnishings, hallowed objects and the Gospel to be carried in procession to the altar. In addition, this space also served other purposes, for example as a baptistery, or as an area for sacred relics or even tombs. Only with the development of more complex liturgical practices did this space come to be occupied by supplementary altars.

¹ Already institutionalized after the Council of Nicaea (325).

² They would appear to be intended to accommodate the female members of the congregation, given its widespread early Christian designation: the *matronea*, *locus mulierum* (place of women).

³ Basilica of St John at Stoudios in Istanbul, and St Demetrios of Thessaloniki.

PART I
The Ruins of the
Aksumite Basilicas
(Fourth–Seventh Century)

Map I

Location of the ancient Aksumite basilicas (fourth–seventh century). Brown lines indicate the main watershed ridges; red lines indicate minor watershed ridges.





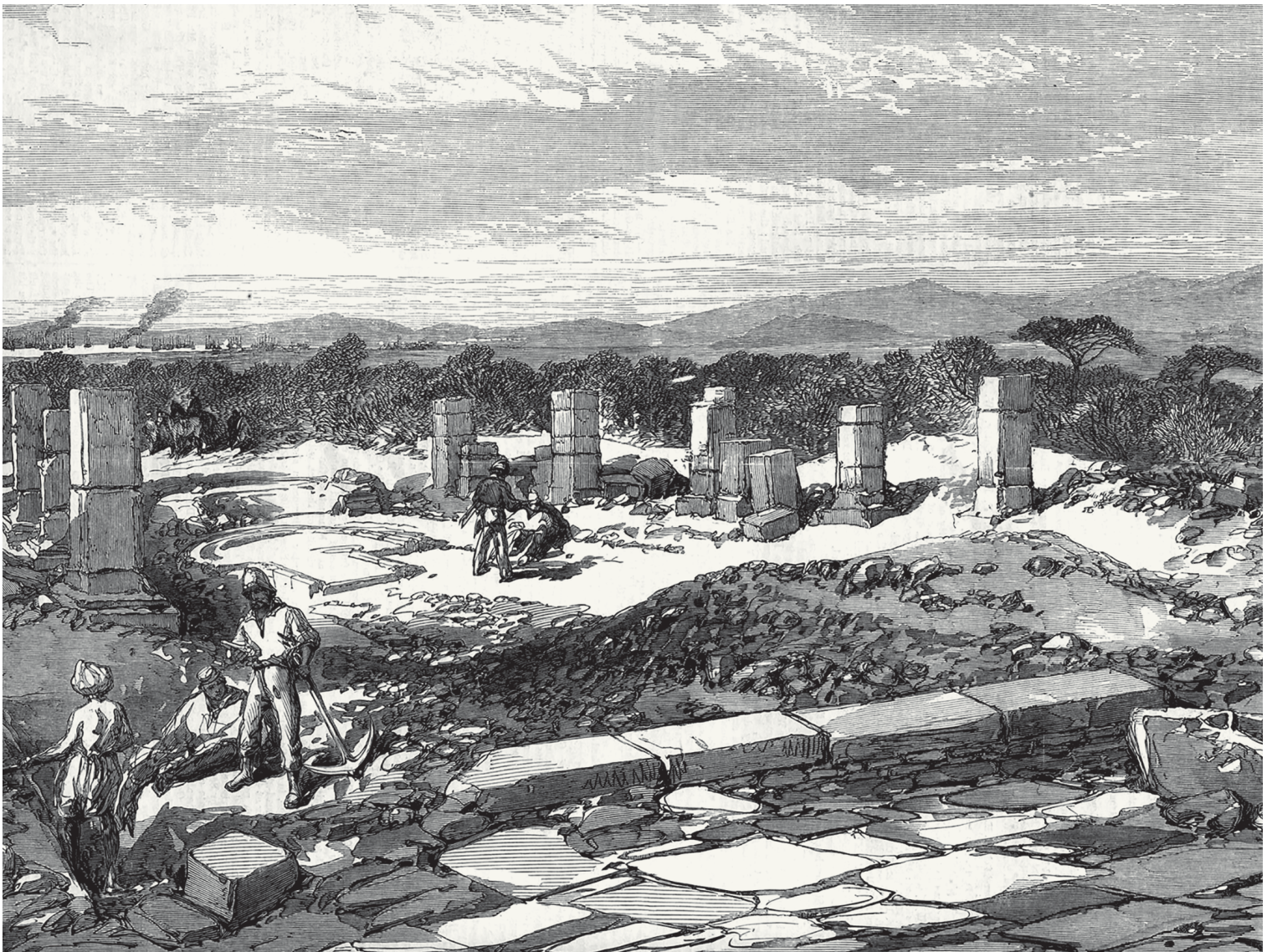


Figure I-1

The basilica, with its evolutionary characteristics and as a rigorously predetermined expression of an organic whole in the correspondence of spaces and functions, arrived in Aksum following the introduction of Christianity there in the first half of the fourth century (c.335) by Frumentius, a devoutly religious Syrian who had been ordained bishop by Athanasius, the patriarch of Alexandria.¹

Caught up by the current fascination with recent archaeological discoveries, in the early 1900s teams of archaeologists from different nations engaged in simple, at times rapid surveys, or extensive campaigns of excavation to locate and reveal the remains of the ancient Aksumite basilicas, which had long been in a state of ruin and disrepair (Figures I-1, I-2).²

Figure I-1. Adulis. Excavation of a basilica during the British expedition of 1867-68 (from *The Illustrated London News*, 5 September 1868, p. 224)



RUINS OF AN ANCIENT GREEK CHURCH AT AGOOLA,

Figure I-2

Figure I-2. View of the ruins of the basilica of Agulā Endā Qirqos (from *The Illustrated London News*, 11 April 1868, p. 374)

Ensconced in a tradition whose roots extend back to the Aksumite era, the remains of these ancient basilicas became the object of renewed interest, as did the existence of craftsmen who for centuries had conserved and passed down the time-honoured traditions and legacy of knowledge originating in the ancient guilds. In effect, these craftsmen became ‘Ethiopian’ through conscious choice, and adopted features which articulated the structural elements and decorative motifs closely based on what had been inherited from the past.

An investigation that addresses the issue of the evolutionary process of the basilica as manifested in Aksumite Ethiopia must involve extensive study of individual sites, including detailed documentation of typological elements, styles

and forms. The first basilicas built in the Aksumite era immediately reflected a series of variations on the basic basilica typology generally found in the Mediterranean area. In particular, the variant with a five-aisled hall, which added one more aisle on each side of the usual three-aisled arrangement, was the model for the construction of the basilica of Māryām Šēyon at Aksum³ – considered the mother of all Ethiopian churches – and dating back to the fourth century, though certain evidence would seem to point to significant interventions from the early sixth century, under the rule of the negus Kālēb, and beyond (Figure I-3).⁴

Information is provided in various documents including the unique and invaluable report of Francisco Alvarez, Jesuit chaplain of a Portuguese mission in Ethiopia, who visited and described the basilica in 1520. He reported the condition in which he found it more than one millennium after its construction, and shortly before it was razed to the ground in 1535 by the incursions of the dreaded Muslim warlord, Ahmad ibn Ibrahīm al-Ghazī (Grāñ):

This church is very large, with five very wide and very long vaulted naves. The area above is terraced, and under the vaults and in the walls there are paintings. The church is lined with very beautiful bare stones assembled together. It has seven chapels, which are all placed with their backs towards the east, and their altars are well adorned [...] This church is surrounded by a grand open-air walled circuit faced with large blocks of bare stone [...] This circuit, in turn, has many large walls around it, and is without a roof.

Figure I-3. Reconstruction of the plan of the basilica Māryām Šēyon at Aksum (from Buxton & Matthews, fig. 20)

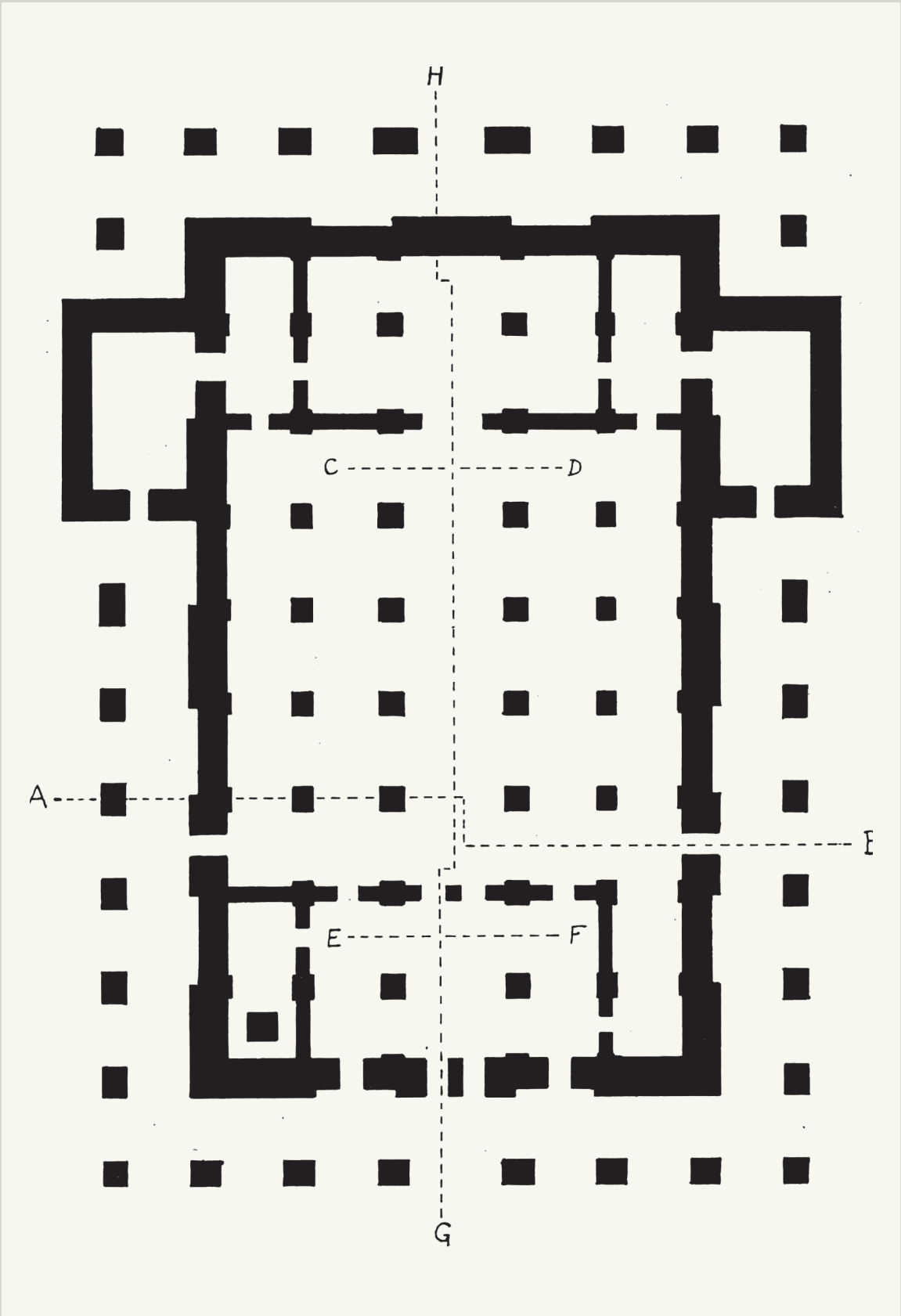


Figure I-3

The excavations and information regarding the remains of this basilica remain insufficient to permit anything more than an inductive reconstruction.

Different hypothetical reconstructions of the plan do, however, exist (Figure I-3).⁶ Nor has this prevented certain scholars from attempting a reconstruction of the elevation of the cathedral, based on what is described in the *Liber Aksumae*⁷ and by Alvarez, corroborated by the example offered by the Aksumite stelai and by structural characteristics that are found in monuments of much later eras.⁸

A typological evolution of the basilica structure outside Ethiopia was introduced in the large basilica built by the Aksumites at Zafar (today Sana'a), when their king, negus Kālēb invaded and settled in Yemen in 523–25 with the backing of the Byzantine emperor Justin I, both to defend Christianity and as a reprisal following the cruel persecution of the Himyarite Christians.

In the basilica of Sana'a (for which the emperor of Constantinople also sent workmen and materials) the typical axial/longitudinal spatial arrangement was already joined by the crosswise positioning of the transept and, further on, by the vertical feature of a *martyrium* covered by a dome, thereby emulating the Constantinian arrangement of the Church of the Holy Sepulchre of Jerusalem built in 328–36.

Descriptions of this basilica mention that it was surrounded by a large space for processions, in keeping with the Ethiopian ceremonial rites, and constructed with the characteristic Aksumite features, with courses of stone alternating with wooden beams connected by 'monkey head' crosspieces. The entrance, from the west, was preceded by a flight of alabaster steps, and the size of the imposing structure erected on the podium included three aisles which extended for a length of about 50 metres, divided by sumptuously decorated wooden columns, crossed by a vaulted transept with a width of 12 metres, with a series of arches set on marble pillars. Beyond this was a *martyrium* of about 20 metres in diameter.⁹

Other ancient Islamic texts emphatically praised its splendour.¹⁰ According to the testimony of al-Tabarī (d. 923), later summarized by Abu al-Makārim, a thirteenth-century Coptic-Arab author:

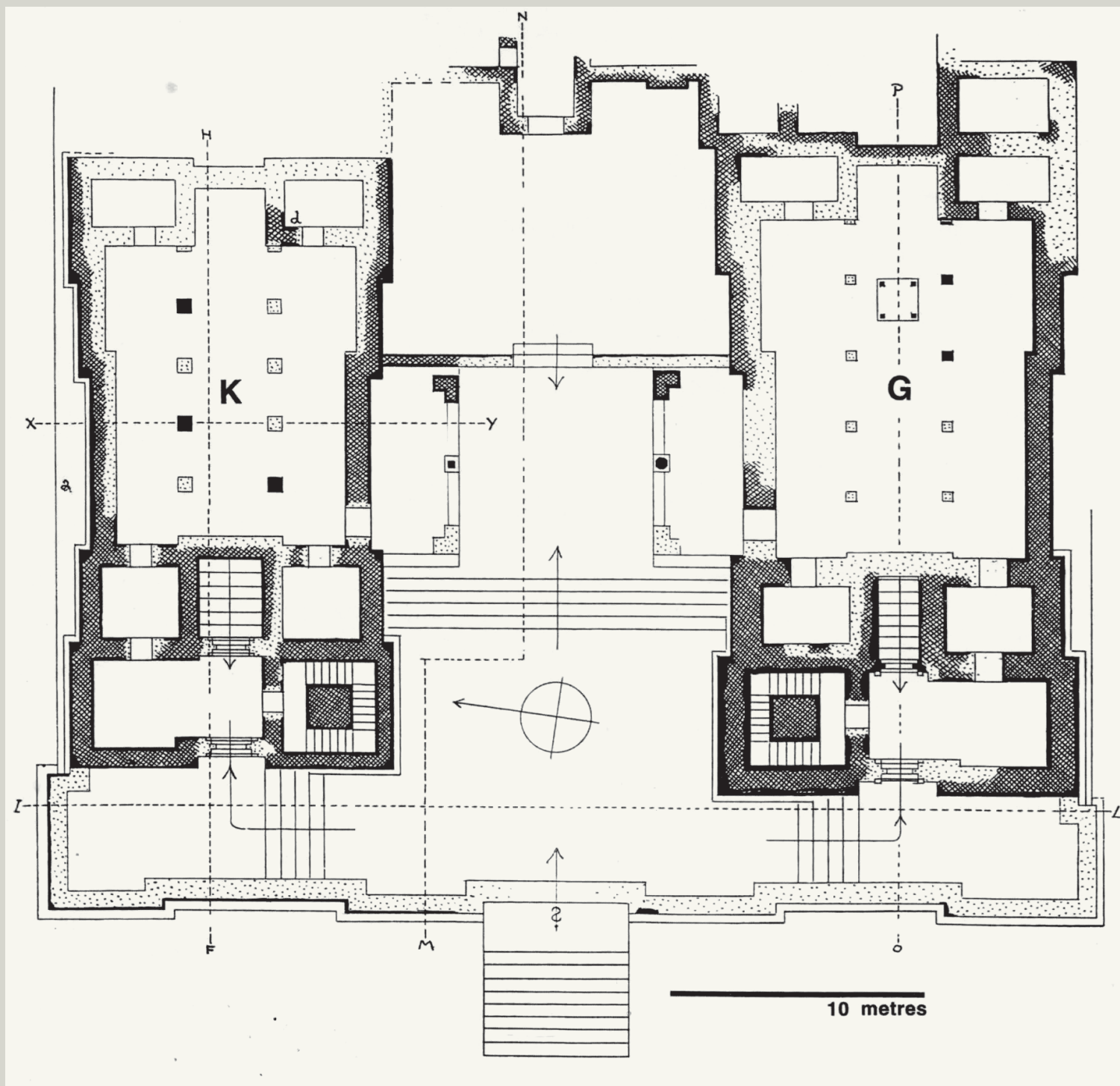


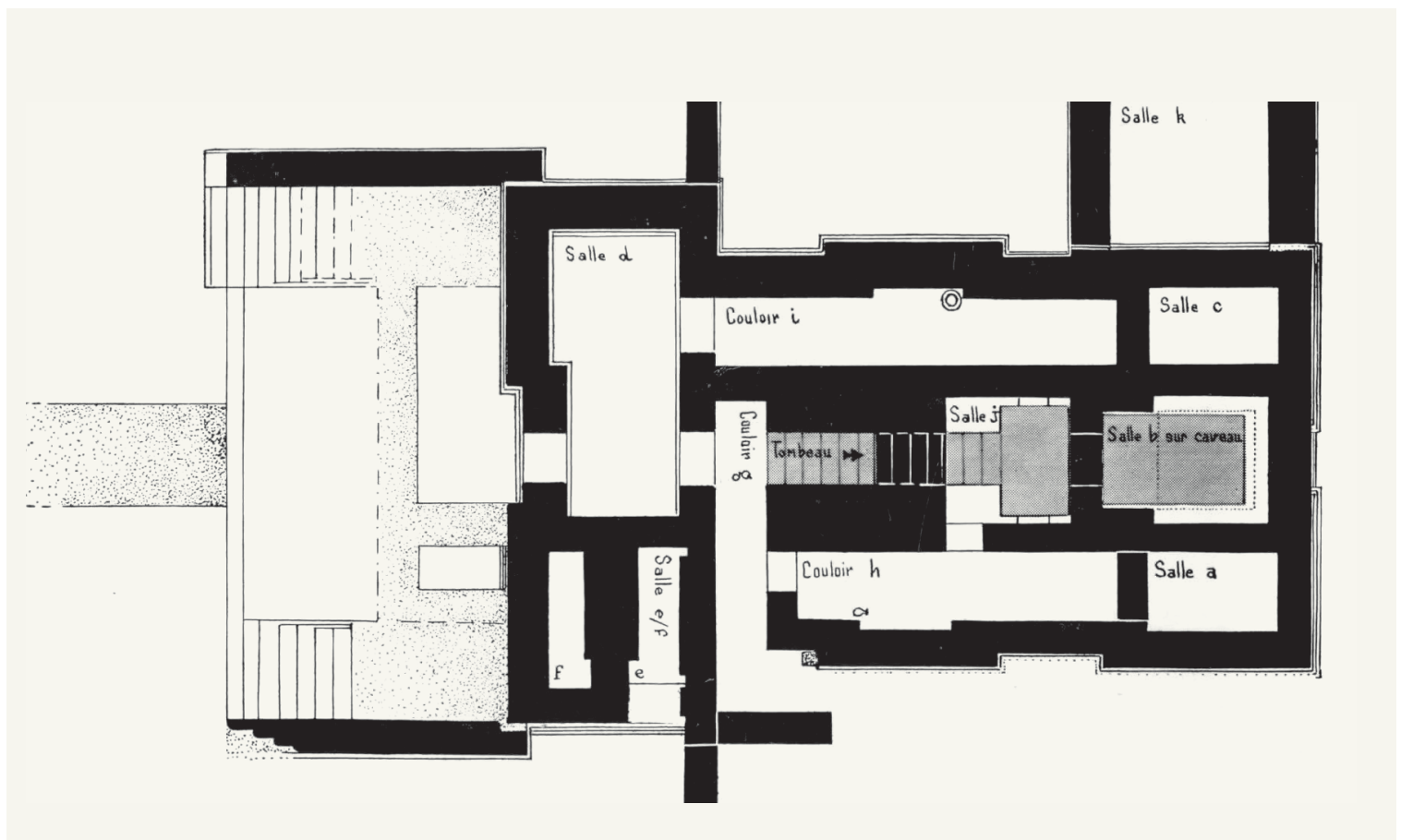
Figure I-4

Figure I-4. Basilicas placed over the flanking tombs of Kālēb and Gabra Masqal at Aksum (cf. Krenker: 129, fig. 278)

Here is the church called Al-Ḳalis which was founded by Ibrahim, who ruled Al-Yaman on behalf of the Negus, king of Abyssinia [...] He built this church, and decorated it with gilding and beautiful paintings, and paved it with coloured marble and [set up] marble pillars [...] He adorned it with the most beautiful ornaments of gold and silver and gilded and coloured glass, and he overlaid the doors with plates of gold studded with silver nails, and silver studded with massive gold nails; and on the doors leading to the altars he put broad plates of gold, and he set them with precious stones, and in the midst of each plate he set a golden cross, in the centre of which was a red, transparent carbuncle; and around these jewels were flowers of open work in various colours, so that spectators were astonished at it [...] And he made for it a screen of skilful workmanship, composed of ebony and sasam-wood, inlaid with pure white ivory, beautifully carved. So the fame of this church spread over that country, and those who had not seen it heard of it, and multitudes made pilgrimages thither, and brought votive offerings.¹¹

Figure I-5. Burial basilica at Maṭarā (from Anfray & Annequin, pl. XXXVIII)

Figure I-5



Between 570 and 575, however, the Aksumites were driven out of Yemen, which in turn became a province of the Sasanian Empire, and in 628 the entire country was converted to Islam. As a result, this erstwhile Christian basilica was finally demolished some time between 753 and 775. It is interesting to note that certain architectural elements of the cathedral of Sana'a which were unquestionably Aksumite in style were later utilized in the Great Mosque of Mecca, and the most beautiful mosaics were removed to decorate the reconstructed Kaaba or Cube.

A specific variation which was employed to adapt the basilica type to burial rites of particular importance can be found in the two basilicas located side by side at the archaeological site of Endā Kālēb.¹² These are traditionally attributed to two rulers of the first half of the sixth century – the aforementioned negus Kālēb and his son Gabra Masqal – and are located about 2 kilometres north-east of the city of Aksum. A flight of steps descending to the tombs and situated at the beginning of the central nave substantially influenced the layout of the entire complex. Since the traditional axial entrance to the halls at the west end was thus effectively blocked, access was transferred instead to one of the lateral aisles (Figure I-4).

When Father Francisco Alvarez visited the site early in the sixteenth century it was virtually in a state of ruin:

At this place of Chaxumo [...] are two underground spaces, into which you cannot enter without a torch: they are not vaulted, but are made of very beautiful worked stones, all equal, in the courses and above [...] These stones are so well joined that they seem like a single piece, and the joints cannot be seen [...] and above and beyond these there is the countryside.¹³

Figure I-6. Schematic representation of a hypothetical layout of the basilicas of Endä Kälēb at Aksum (Mario Di Salvo)

Figure I-6

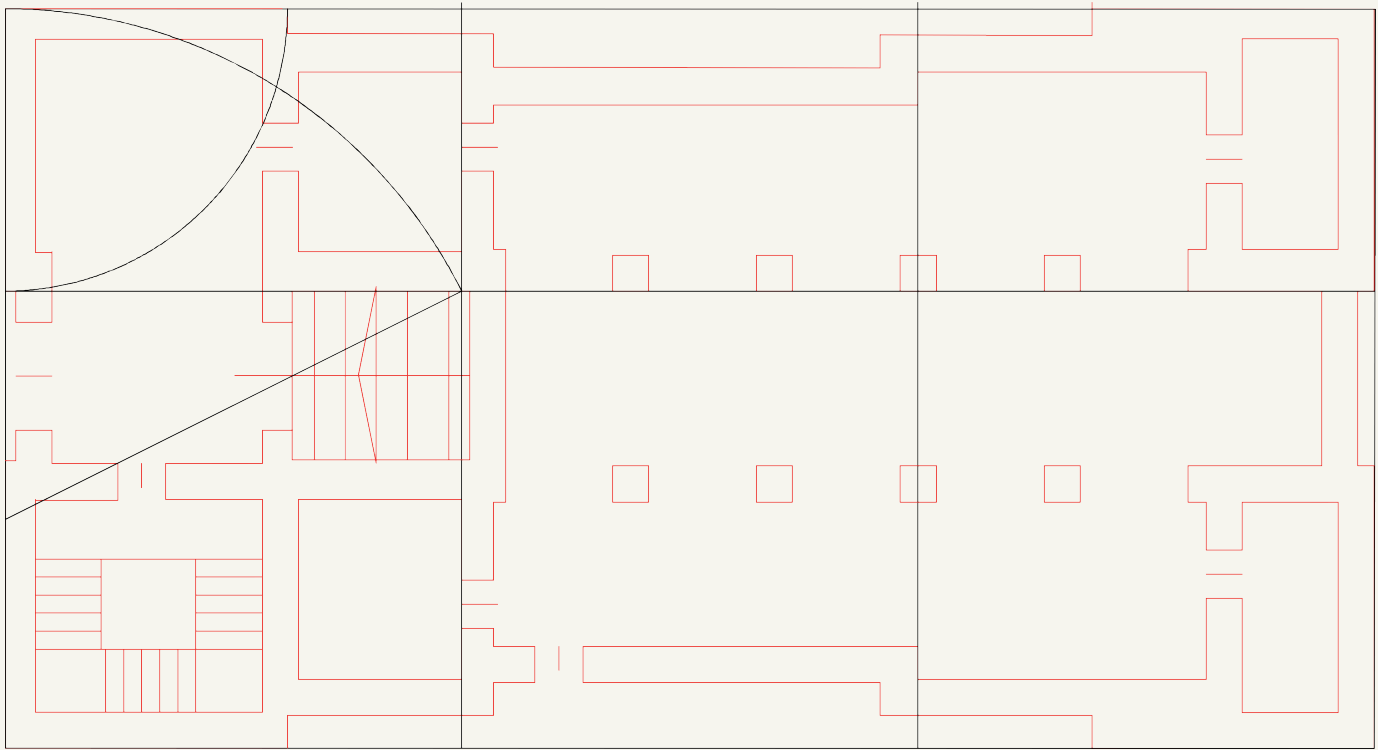


Figure I-7a

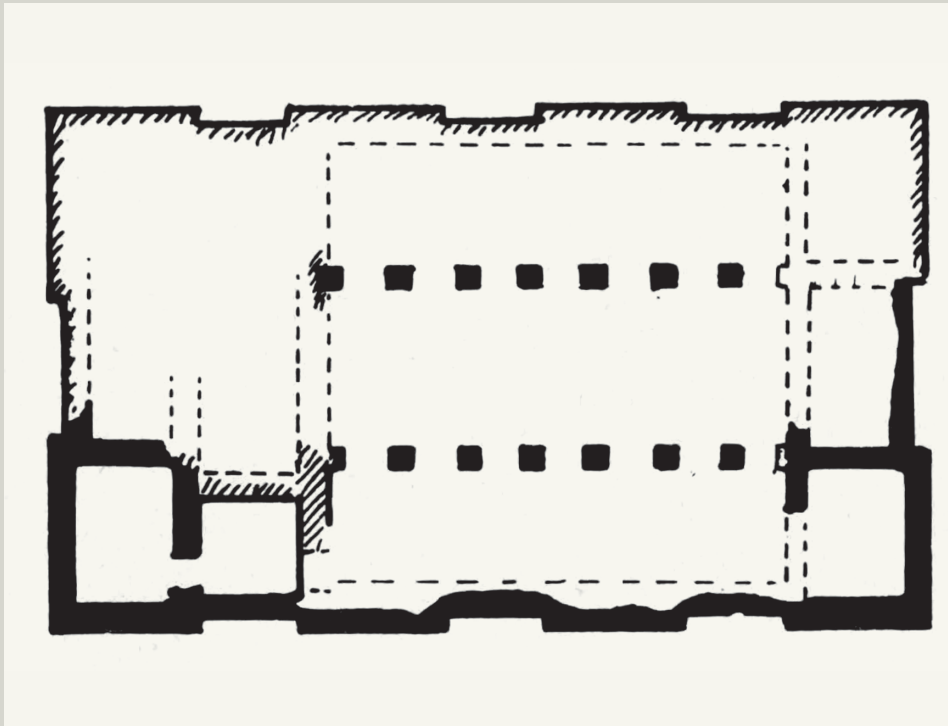
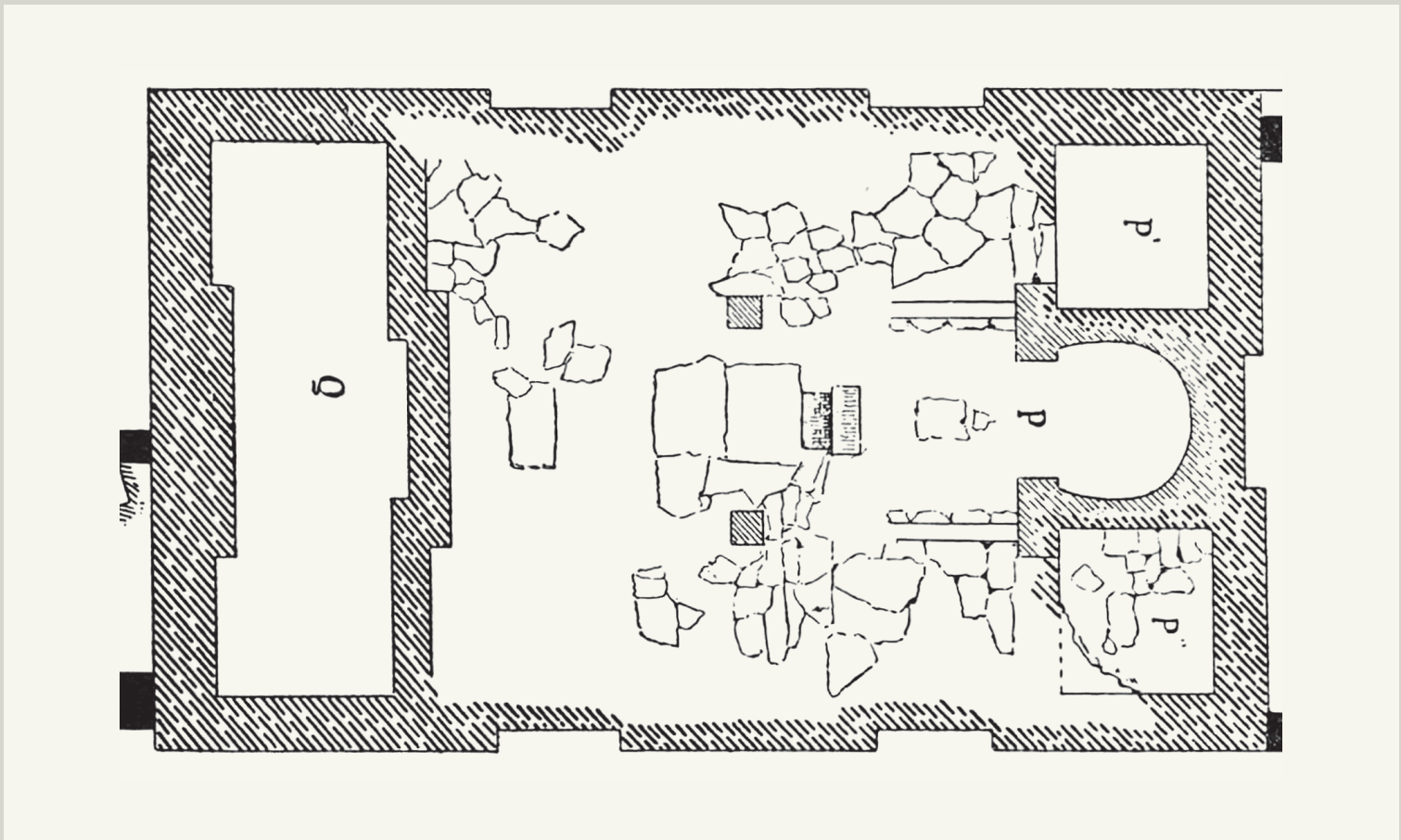


Figure I-7a. Adulis. Plan of a basilica (from Anfray 1990: 126, after Paribeni)

Figure I-7b. Adulis. Plan of a basilica (sketch of Theodor von Lüpke from sketches of Paribeni - cf. Krencker: 166, ill. 337)

Figure I-7b



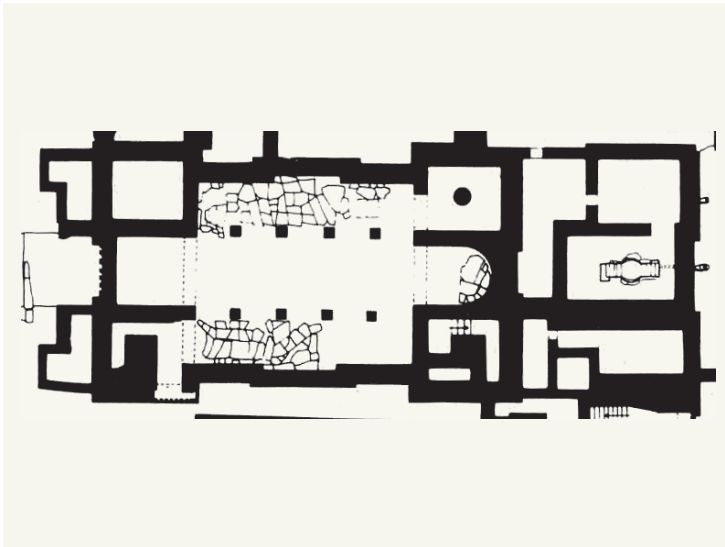


Figure I-8

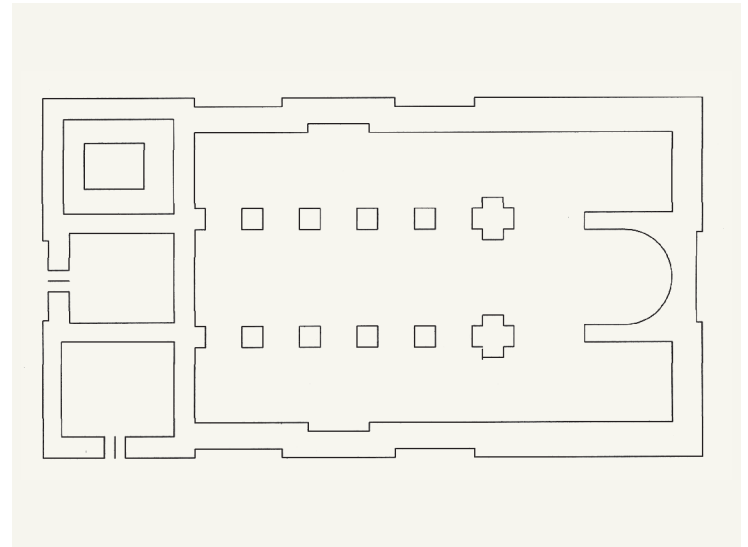


Figure I-9

The same variant dictated by burial functions is found in the small basilica standing on the plain of Maṭarā, which the archaeologists call building D, featuring the same arrangement of the internal steps at the beginning of the central nave (Figure I-5).¹⁴

In the process of analysing *quod superest* of the ancient Aksumite basilicas, whether they correspond to the basic basilica typology or vary it, it is essential to try to identify the parameters and references that were applied in the design, generally based on the harmonious combination of multiple compositional and structural factors. Each design, among other things, imposes a regulating layout based not only on empirical criteria, but also – and more importantly – on precise geometric relationships which would in each particular instance allow for the correct ‘footprint’ on the ground while at the same time giving harmonious proportions to the elevated components. From comparing extant ruins and planimetric surveys, it does not yet seem possible to detect the use of a viable and constant unit of measure, unless we allow for a certain degree of approximation. From field surveys, and on the basis of literary documents (*Liber Axumae*),¹⁵ certain scholars hypothesize that the Aksumite cubit could measure roughly between 45 and 50 cm. What must also be taken into account is the plausibility of its equivalence to the Alexandrine *pechys* (46.2 cm).¹⁶ The determination of its exact size can only come from a rigorous survey of a large number of masonry structures, to create a database that would permit the deduction of a reliable average.

Though of different size (the one to the south, Gabra Masqal, is slightly larger), the form and proportions of both basilicas at Endā Kālēb are virtually identical. Only the use of a common preordained geometric tracing (similar to that

Figure I-8. Maṭarā, plan of the basilica and adjacent baptistery (from Anfray 1990: 122)

Figure I-9. Agulā Endā Qirqos. Planimetric scheme of the remaining structures (Mario Di Salvo)

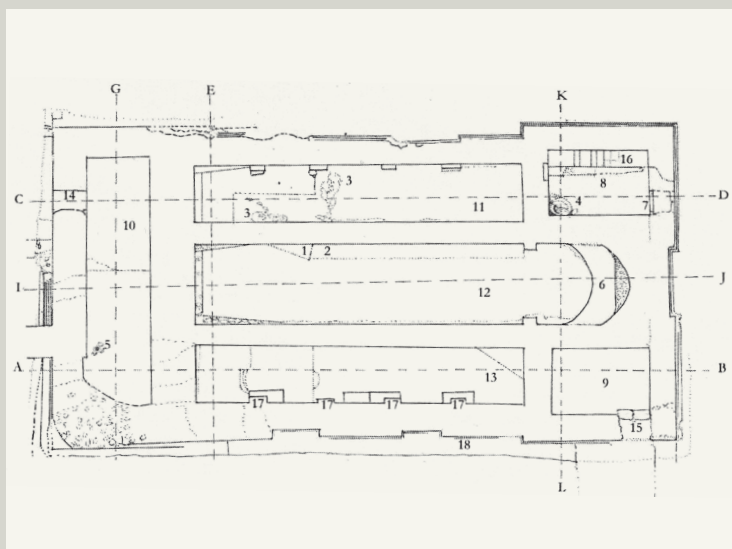


Figure I-10

Figure I-10. Aksum, excavation survey of the church of Arbā'etu Ensesā (from Tekle Hagos 2008: 81)

Figure I-11. Plan of the basilica of Melazo Endā Qirqos (from De Contenson 1961, pl. XXV)

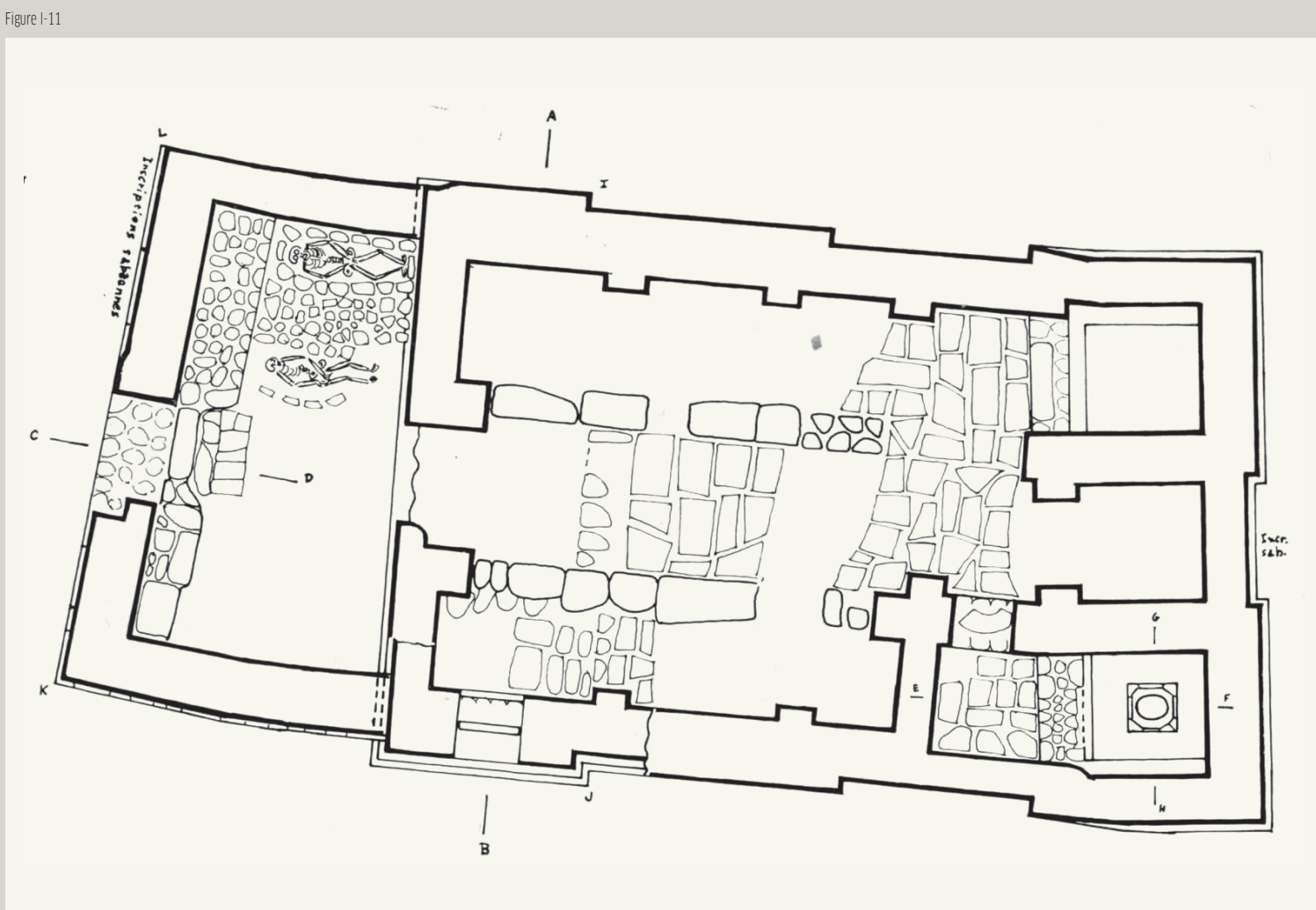


Figure I-11

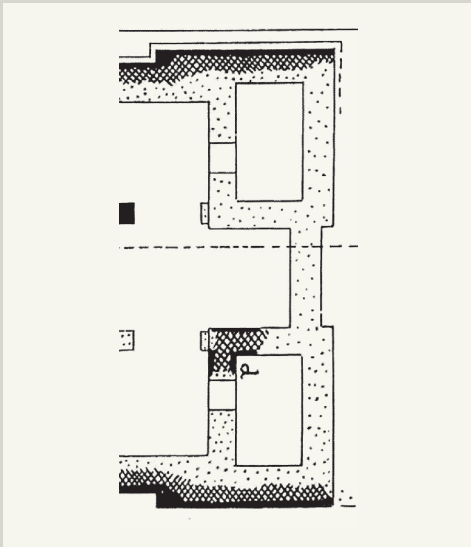


Figure I-12

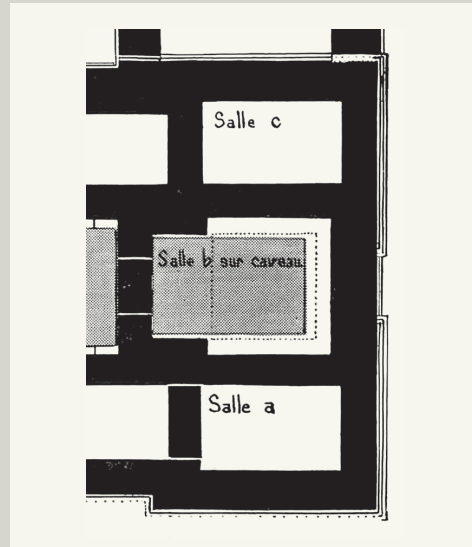


Figure I-13

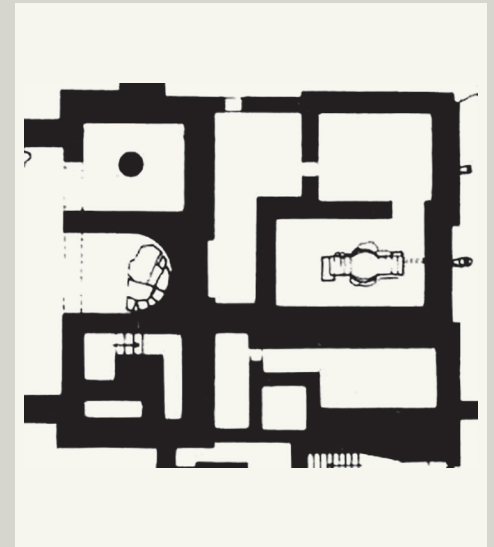


Figure I-14

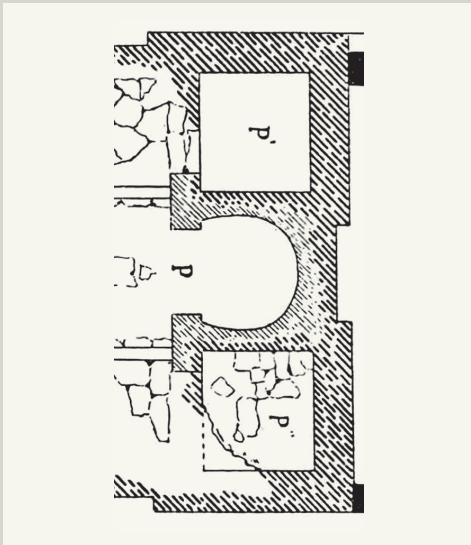


Figure I-15

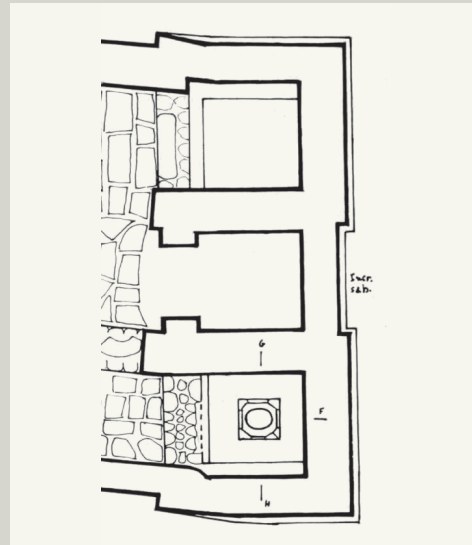


Figure I-16

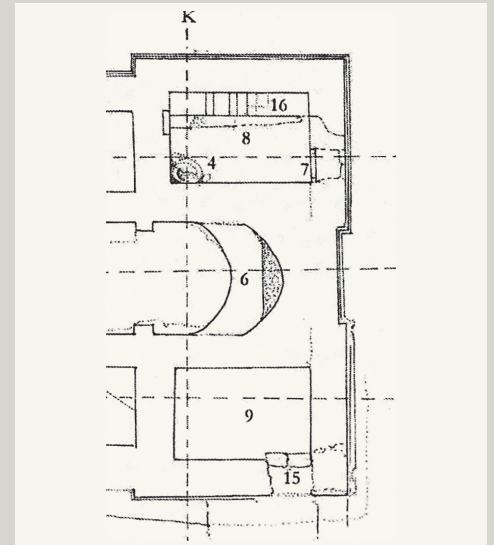


Figure I-17

Figure I-12. Apsidal sector of the basilicas of Enda Kālēb (cf. Krencker: 129, fig. 278)

Figure I-13. Apsidal sector of the burial basilica of Maṭarā (from Anfray & Annequin, pl. XXXVIII)

Figure I-14. Apsidal sector of the basilica of Maṭarā (from Anfray 1990)

Figure I-15. Apsidal sector of the basilica of Adulis (from Krencker: 166, ill. 337)

Figure I-16. Apsidal sector of the basilica of Melazo Endā Qirqos (from De Contenson 1961, pl. XXV)

Figure I-17. Apsidal sector of the basilica of Arbā'etu Ensesā at Aksum (from Tekle Hagos 2008)

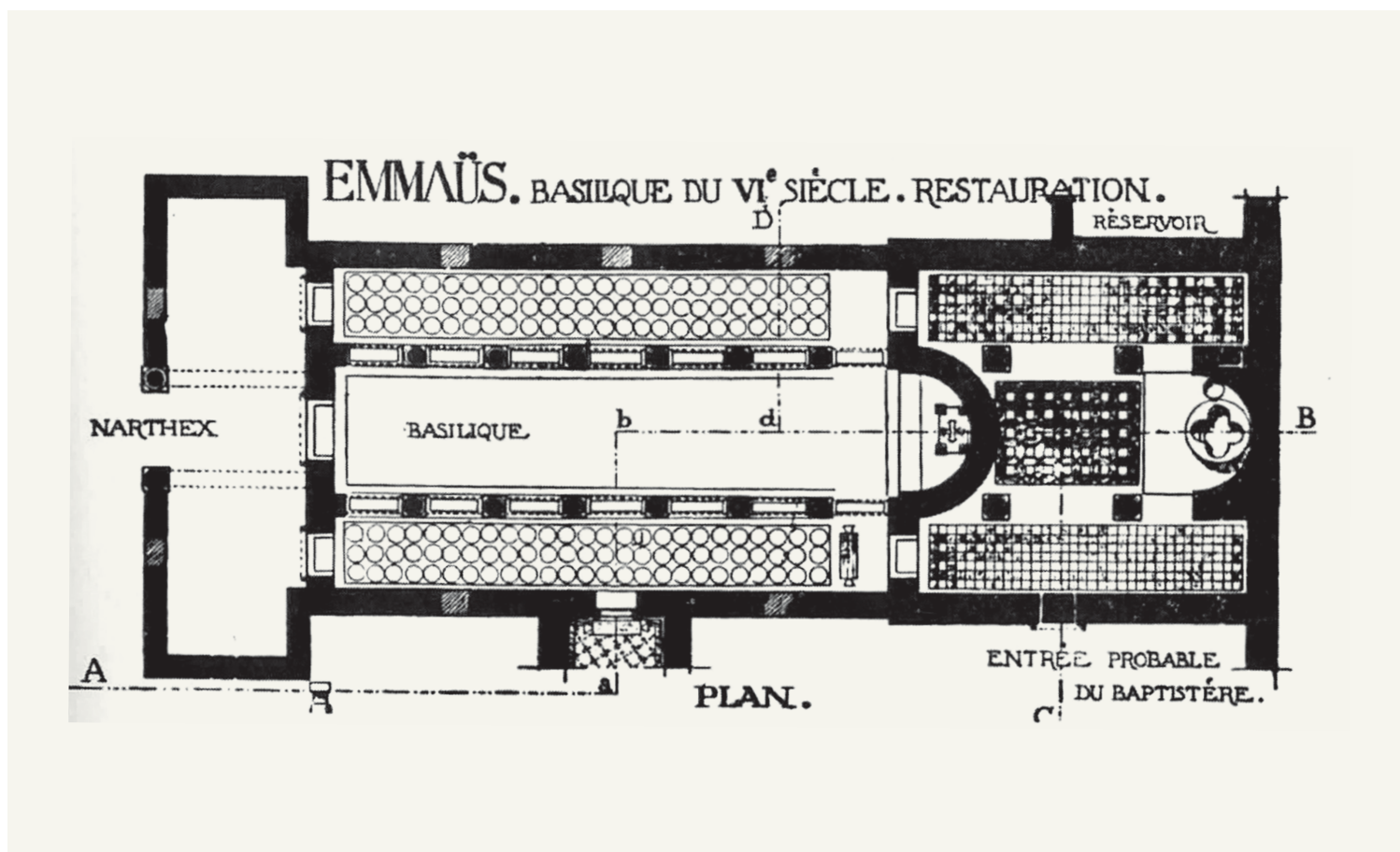


Figure I-18

Figure I-18. Basilica of 'Amwas, with external baptistery on axis with the apse (from Testini, fig. 313)

hypothesized in Figure I-6) would have attained so high a degree of similarity, from the recesses and protrusions of the boundary walls to the positioning of the rows of pillars inside, even down to the minutest detail.

The conscious use of geometric criteria through which to establish the two- and three-dimensional characteristics of the design is also clearly discernible in the relationship between the measurements of the halls, which are the most structurally demanding part of the basilica. The internal measurements of the halls are also relatively similar. They range, in fact, from about 9 to 11 metres in width and about 11 to 13 metres in length, and are thus large enough to require the introduction of pillars to subdivide them into aisles and spans, so as to reduce the distance between the supports of the roof.

On the other hand, the ratio between width and length of the halls in the various basilicas of this era varies. In those excavated at Adulis (Figures I-7a, I-7b), and at Maṭarā as well as at Agulā Endā Qirqos (Figure I-9) the ratio is about 1:1, more or less a square, as is also often seen in the footprint of Aksumite works of secular architecture.



Figure I-19

Figure I-19. Baptismal font at Qala'at Semaan in Syria, end of fifth century (photograph: Mario Di Salvo)

Figure I-20. Baptismal font at Yeha (photograph: Mario Di Salvo)



Figure I-20

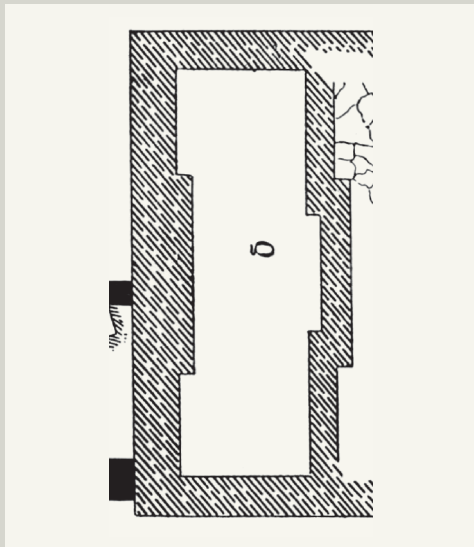


Figure I-21

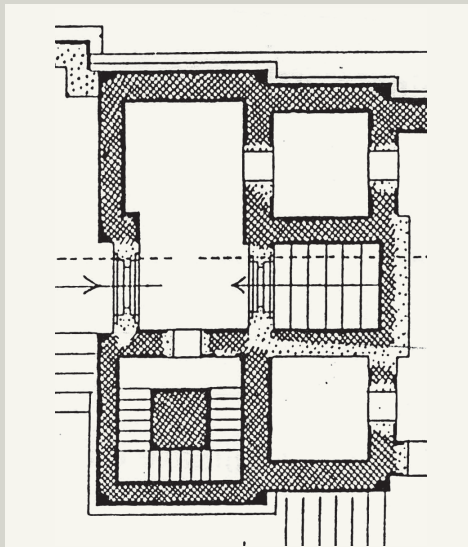


Figure I-22

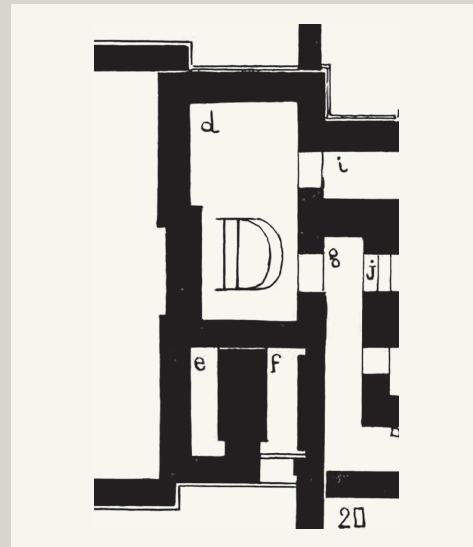


Figure I-23

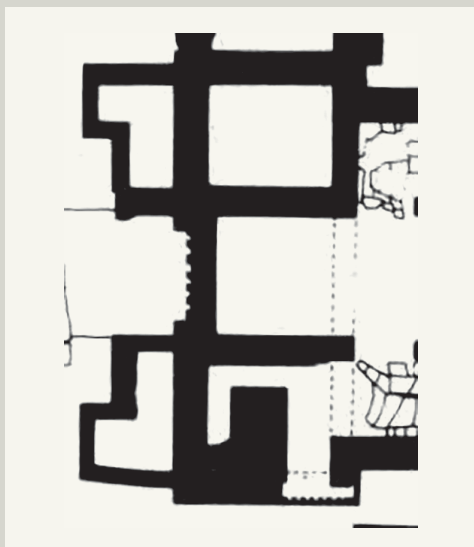


Figure I-24

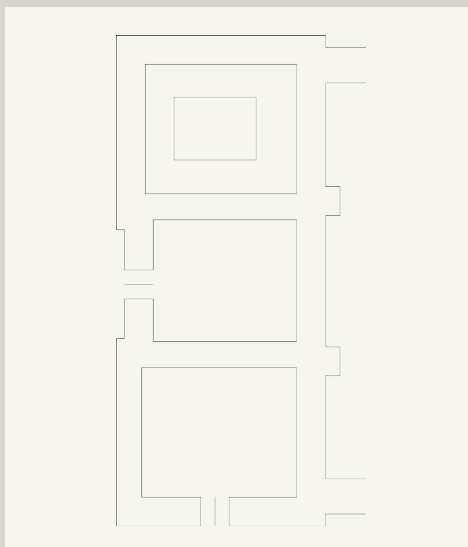


Figure I-25

Figure I-21. Narthex of the basilica of Adulis (from Krencker: 166, ill. 337)

Figure I-22. Narthex of the basilicas of Endä Kälēb (from Krencker: 166, ill. 337)

Figure I-23. Narthex of the burial basilica of Maṭarā (from Anfray & Annequin, pl. XXXVIII)

Figure I-24. Narthex of the basilica of Maṭarā (from Anfray 1990)

Figure I-25. Narthex of the basilica of Agulā Endä Qirqos (Mario Di Salvo)

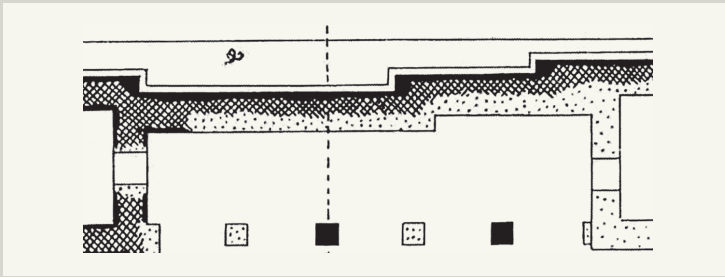


Figure I-26

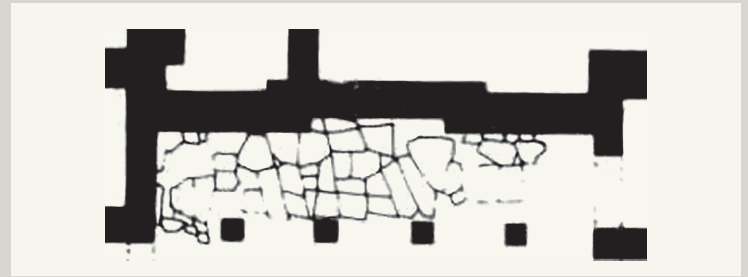


Figure I-27

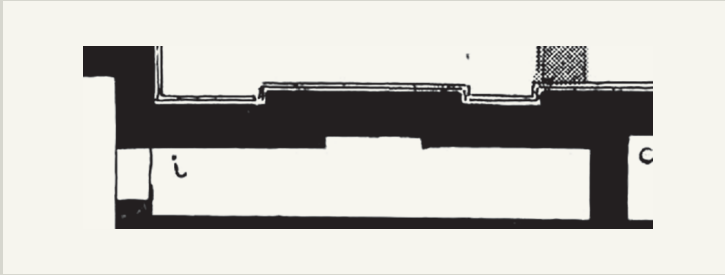


Figure I-28

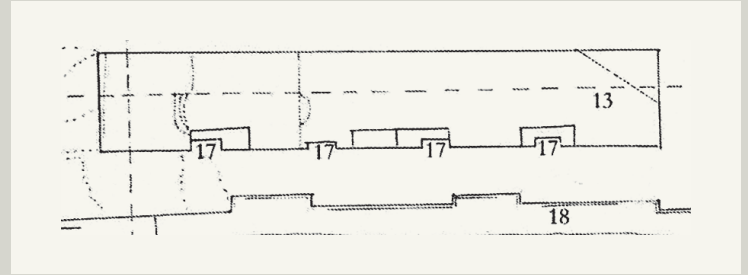


Figure I-29

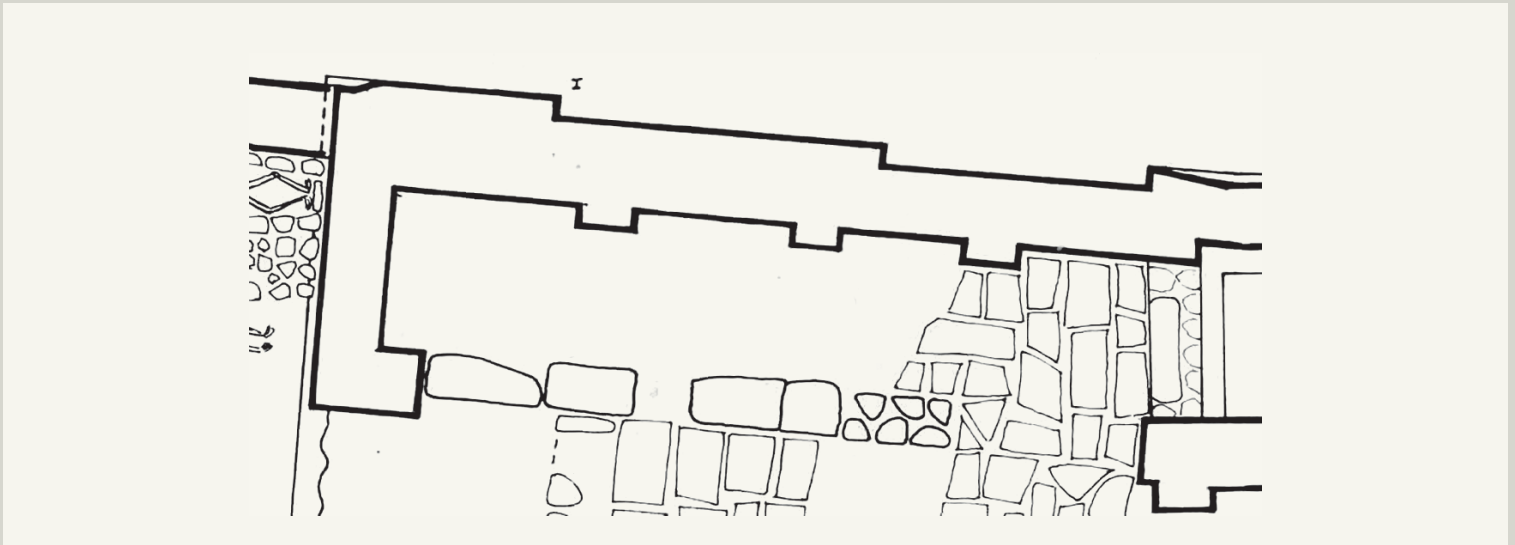


Figure I-30

Figure I-26. Perimeter masonry of the hall of the basilicas of Endä Kälēb at Aksum (from Krencker: 129, fig. 278)

Figure I-29. Perimeter masonry of the hall of Arbā'etu Ensesā at Aksum (from Tekle Hagos 2008)

Figure I-27. Perimeter masonry of the hall of the basilica of Maṭarā (from Anfray 1990)

Figure I-30. Perimeter masonry of the hall of Melazo Endä Qirqos (from De Contenson 1961, pl. XXV)

Figure I-28. Perimeter masonry of the hall of the burial basilica of Maṭarā (from Anfray & Annequin, pl. XXXVIII)

Therefore, once the width of the hall had been determined, one might expect the same depth to follow in proportion. Instead, the ratio of 3:4 between width and length in the hall of the basilicas of Endā Kālēb (Figure I-4) and Arbā'etu Ensesā¹⁷ (Figure I-10) – located on a strip of land that runs along the lower southern slopes of the Māy Qoho hill, just above Ezana Square – suggests the so-called 'Pythagorean triangle',¹⁸ already applied in the architecture of ancient Egypt to erect walls at a perfect 90° angle.

Like the Aksumite palaces, from a structural viewpoint, the first Ethiopian basilicas are generally raised on a platform with offsets, with what tends to be a symmetrical arrangement of protrusions and setbacks introduced to ensure greater resistance to stress by means of form.¹⁹

In compositional terms, then, the preliminary design of the Aksumite basilicas involved remarkable aesthetic criteria, based on a symmetrical design for the structure as a whole, but independent of the fact that the protrusions and recesses did not correspond to the axes of the hall, as seen in one of the basilicas of Adulis on the Red Sea (Figure I-7a). Nor do these criteria determine the irregular perimeter of the interior of the halls of both the basilicas in the Endā Kālēb complex.

For access to the basilicas of Endā Kālēb (Figure I-4), and the cathedral of Sana'a, it was necessary to climb a monumental flight of steps; or in the case of the small basilica of Maṭarā known as building D (Figure I-5) to mount dramatically paired ramps. These were all axially positioned with respect to the complex.

Subordinate to this, where the depth of the presbytery sector tended to equal that of the narthex, the arrangement of the outer walls was generally precisely symmetrical to the longitudinal and cross sections of the hall, as in the basilica excavated in the large complex on the plain of Maṭarā (Figure I-8). In this building, even the columns of the spans are symmetrically arranged with respect to the crosswise axis of the hall in keeping with a pattern a-b-b-b-a, with the first and last equal to each other and smaller than the three at the centre.

In fact, such refined symmetry in the masonry composition of the facades of the overall basilica form is so stringently observed in the architecture of the first Aksumite basilicas that where it is not encountered, its absence would suggest the weakening over time of habitual norms and the painstaking compositional orthodoxy that had previously prevailed.

Where the protrusions and setbacks of the outer walls make symmetrical reference only to the axes of the hall, but not to the overall building (which was also due to a particular development of the narthex compared to the apse sector of

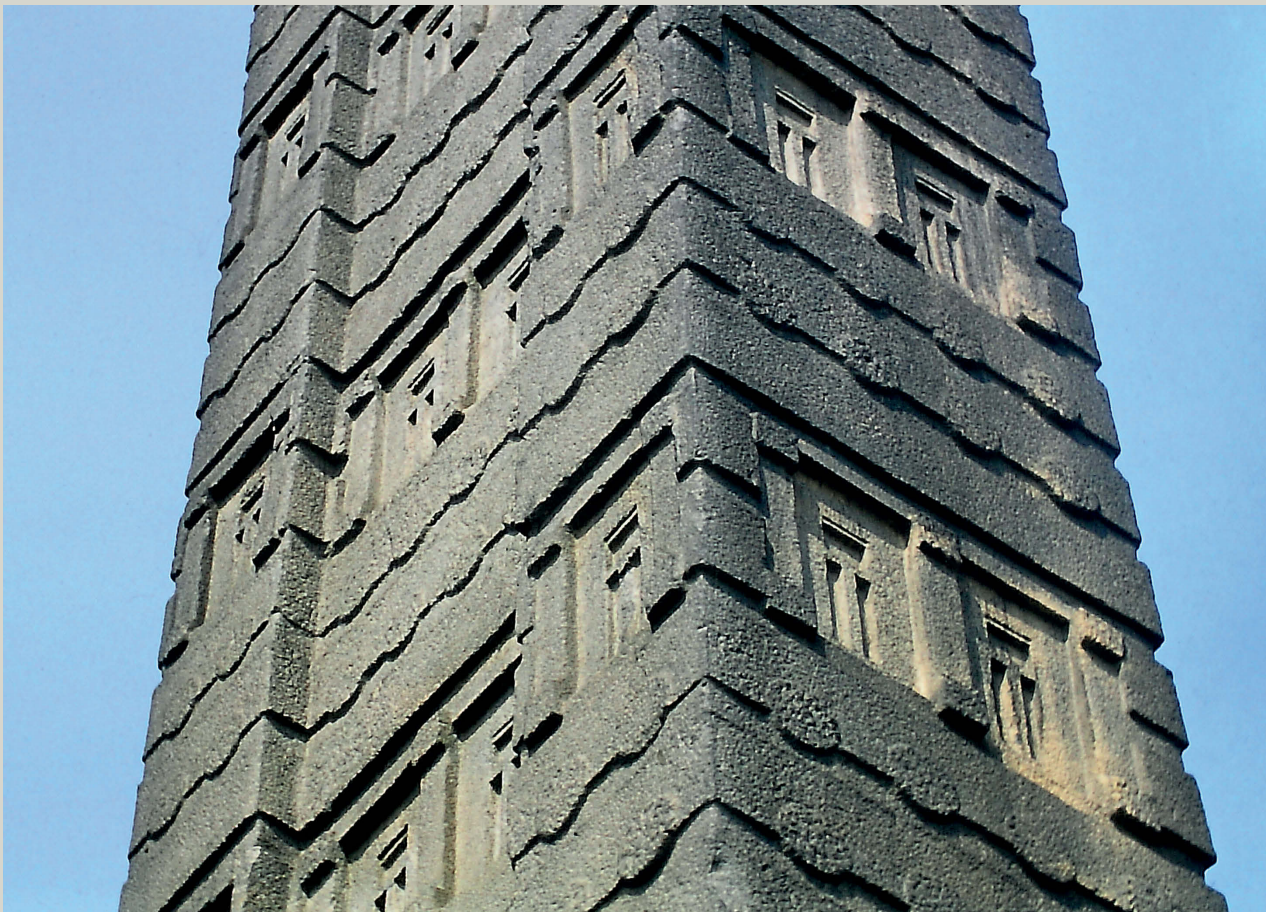


Figure I-31

Figure I-31. Illustrative example of the masonry and windows of a stele situated in Aksum (photograph: Mario Di Salvo)



Figure I-32

Figure I-32. Detail of the podium at Endä Kälēb near Aksum (photograph: Mario Di Salvo)



Figure I-33

Figure I-33. Podium of the church of Arbā'etu Ensesā at Aksum (photograph: Mario Di Salvo)

the building, or vice versa), it would therefore seem plausible to consign these basilicas to an era spanning both the sixth and seventh centuries.

Thus the ruins excavated at the ancient port of Adulis – apparently destroyed in 630 – reveal an ancient basilica with a symmetrical arrangement of protrusions and recesses in the outer wall masonry referring only to the axes of the hall (Figure I-7b). A similar configuration is found, due to the abnormal development of the presbytery, in the basilica of Agulā Endā Qirqos, whose remains are still in evidence evocatively rising from a high platform on the plain just to the south of Wukro in the direction of Mekele (Figure I-9).²⁰

It can therefore be legitimately presumed that the tracing of the axes of the hall gradually came to constitute the main point of reference for the arrangement of the protrusions and recesses of the facades of the basilicas.

These considerations do not, however, apply to the basilica of Melazo Endā Qirqos,²¹ where there is evidence of alterations to the original composition in multiple phases. In effect, the excavations have revealed an ancient hall with three aisles, with the presbytery being oblique to the axis of the hall – for no apparent architectural necessity – and to which a narthex was subsequently added.

Viewed from a current perspective, it reflects no unified organic layout, but is rather the result of successive modifications made in the distant past. This is also indicated by the different composition of the protrusions and setbacks of the walls forming the northern and southern facades (Figure I-11).

One characteristic shared by all the Aksumite basilicas is the lack of any protrusion on the eastern wall of the sanctuary, which in fact is slightly recessed in between the two eastern service rooms which flank the sanctuary and are referred to as the *pastophoria*.

From a quadrangular plan in the early basilicas of Endā Kālēb (Figures I-4, I-12) and Maṭarā (Figures I-5, I-13), the sanctuary later evolved into a horseshoe form, starting in the second half of the sixth century, in the basilicas excavated at Maṭarā (Figures I-8, I-14) and Adulis (Figures I-7b, I-15), up to those of Arbā'etu Ensesā at Aksum (Figures I-10, I-17) and Agulā Endā Qirqos (Figure I-9); with all of them still retaining the straight exterior between the protrusions of the *pastophoria*.

These *pastophoria* have openings into the lateral aisles and, apart from the traditional liturgical functions, they could also serve various different purposes.

Certainly in the basilica of Melazo Endā Qirqos the presence of an octagonal baptismal font in the southern compartment bears witness to its function as a baptistery (Figures I-11, I-16), which can also be attributed to the corresponding space of Arbā'etu Ensesā at Aksum, as it is directly accessed from the outside, while



Figure I-34

Figure I-34. Northern side of the podium of the basilica of Agulā Endā Qirqos with traces left by the insertion of wooden beams (photograph: Mario Di Salvo)

the compartment to the north-east turns out to have an underground treasury room below (Figures I-10, I-17).

On the other hand, in the basilica excavated at Maṭarā (Figure I-8) the same southern room seems to contain traces of a staircase leading to an upper level, while the baptismal font is aligned with the longitudinal axis of the basilica, but placed beyond the apse, recalling an arrangement found, significantly, in the Palestinian basilica of 'Amwas from the sixth century (Figure I-18).

The same type of baptismal font found in the basilica of Maṭarā, circular with two aligned staircases to descend and ascend, can also be associated with the font in use in Syria at the end of the fifth century (Figure I-19), but was also discovered in Ethiopia in the church created inside the very ancient Sabaeen structure of Yeha (Figure I-20).

The faithful entered the hall by crossing a narthex which generally contained a means for ascent to an upper level, which constitutes the only clue offered by the ruins of the Aksumite basilicas regarding their height. The traces of staircases in the narthex would seem to indicate an ascent to galleries placed to help support the roof of the central nave. The narthex was therefore not as wide as the facade of the building – as in one of the basilicas excavated at Adulis (Figures I-7b, I-21) – but reduced so as to block entry from one of the lateral aisles, as in the burial basilicas of Endā Kālēb (Figures I-4, I-22) and Maṭarā (Figures I-5, I-23). Finally, the presence of a service space on the side opposite the staircase in the basilicas of Maṭarā (Figures I-8, I-24) and Agulā Endā Qirqos (Figures I-9, I-25) further reduced the narthex to a simple vestibule from which to reach the central nave of the basilica.

Another factor that emerges from the examination of the ruins of the basilicas built in the Aksumite era comes from the hypothesis of a diachronic evolution of construction techniques across the span of two centuries (sixth to seventh); but the differences in techniques could also be plausibly attributed to the different systems applied by different builders. We can in fact see two quite specific ways of approaching the composition of masonry, while always preserving the structural-figurative external pattern of protrusions and recesses that was already an established feature of Aksumite architecture.

In the basilicas of Endā Kālēb (Figures I-4, I-26) and Agulā Endā Qirqos (Figure I-9), as well as in those excavated at Maṭarā (Figures I-5, I-8, I-27, I-28) and Adulis (Figure I-7b), the external profile of the outer wall masonry with protrusions and recesses corresponds exactly with the layout inside the hall, thus indicating a constant thickness.

Only starting in the seventh century, in the basilicas of Arbā'etu Ensesā at Aksum (Figures I-10, I-29) and Melazo Endā Qirqos (Figures I-11, I-30), do we find an innovative pattern in the outer wall masonry, which now becomes straight on the inside, with pilaster strips positioned to correspond to the internal pillars supporting the roof beams of the lateral aisles.

It is possible to deduce what might have been widespread masonry construction techniques from their painstaking reproduction in stone, with a merely allusive function, on the stelai of Aksum, dating back to before the fourth century (Figure I-31). They bear witness to masonry made with an alternating succession of stone and wooden girders inserted horizontally, at regular intervals, on the masonry fronts. The girders were then blocked by interlocking ties, also in wood, leaving protruding ends which the Ethiopians called *re'esa hebāy* or monkey heads. The irregular stone courses were then covered with stucco, while the wooden framework remained exposed.

The fact that this might have been the masonry arrangement of the cathedral of Aksum, Māryām Šeyon – though reworked over the centuries – emerges from its description in the *Liber Aksumae*, which reported the presence of as many as 3,815 monkey heads inserted in the walls.²²

In addition the remains of upright masonry found in Aksumite basilicas, from Endā Kālēb to Arbā'etu Ensesā at Aksum, show masonry surfaces made with courses of hewn stones bound by mortar, but alternating at intervals to make the levels regular, with courses of flat slabs in place of the wooden girders. Squared corner blocks then reinforced the edges.

The construction of the offset podia of the ancient basilicas also involved the same empirical criteria dictated by the materials and construction techniques employed in each case (Figures I-32, I-33). In place of the courses of flat slabs in the basilica of Agulā Endā Qirqos, only sporadic traces remain of the horizontal insertion of wooden beams, more suitable than stone to absorb stress (Figure I-34).

Given the state of ruin of the ancient Aksumite basilicas, all that remains of the rows of pillars separating the aisles are the supporting foundations. Only sporadic portions are left of the stone pillars (with recessed edges) and their stepped bases found *in situ* in the ancient Aksumite basilicas (Figure I-35);²³ they are similar to those found in various other ruins of ancient monuments, as at Qohayto²⁴ and in the enclosure of Māryām Šeyon.

It is impossible to document the use of architraves or arches between the pillars, although the use of the brick arch is known in Aksumite architecture (Figure I-36).²⁵ Nor is it possible to ascertain the type of roof used in the central

Figure I-35. Pillars in Aksumite ruins
(anonymous photograph)



Figure I-35

nave – vaulted, trussed or flat – apart from Alvarez’s reference to roofs ‘*fatte in volto*’²⁶ of the nave of Māryām Šeyon at Aksum, a description that could be interpreted in different ways, namely as actual vaulting or simply as not flat, such as a roof supported by trusses.

The same Aksumite stelai also illustrate the characteristic wooden framing of doors and windows, a characteristic which remained unchanged for centuries in Ethiopian architecture (Figure I-37). In any case, all the wooden components of the ancient Aksumite buildings have been obliterated by the ravages of time.

The possibility of moving by degrees from recognizing one phase to distinguishing its successor, or its precursor, can permit us to deduce the variations in basilica forms and their diachronic development dating from the following centuries, although even this will prove insufficient in terms of attempting to determine a true chronological order.

Within the scope of the existing ruins, we can, however, observe the configuration and consolidation of the basilica space, which remained constant over the years. The result is a development from one structure to the next, a mutation through different variations, but always with specifically typical factors prevailing over atypical features.

Figure I-36. Entrance portal with brick arch of a tomb at Aksum (end of third century)
(photograph: Mario Di Salvo)

Figure I-36



Figure I-37

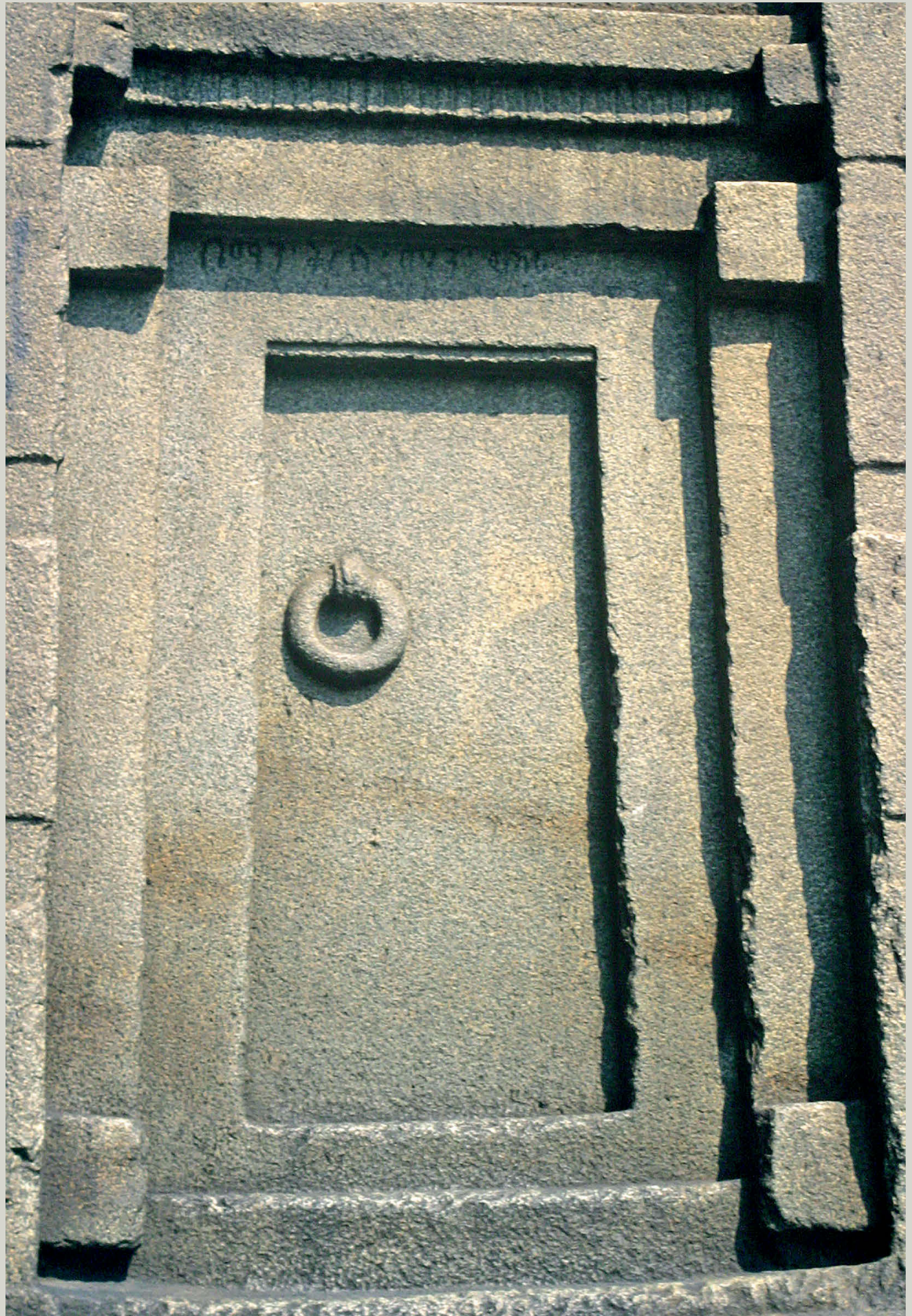


Figure I-37. Engraved door in a stele of Aksum (photograph: Mario Di Salvo)

¹ 'malgré l'influence syrienne ..., il est donc permis de se demander si dès l'origine, cette influence ne s'est pas transmise par l'intermédiaire de l'église copte primitive' (De Contenson 1961: 43).

² The state of ruin of these basilicas had already been revealed in rare illustrations engraved in 1867–68 to document the British punitive expedition in Abyssinia led by Lieutenant General Robert Napier against the negus Tewodros II.

³ Monneret de Villard 1938: 21–31; De Contenson 1963; Buxton 1970: 102; Leroy: 92–93; Buxton & Matthews: 66–77; Girma Kidane & Wilding: 21; Munro-Hay 1991: 209–11; Phillipson, 1997: 169–76, fig. 256; Phillipson 1998: 114–16; Munro-Hay 2003: 183–85.

⁴ Phillipson 2009: 39–40.

⁵ Alvarez: 203v–204. Based on the Italian translation of the account of the travels of Francisco Alvarez published for the first time in Portuguese in 1540: 'Questa chiesa è molto grande, ha cinque navi assai ben larghe e molto lunghe, fatte in volto, e di sopra al volto è terrazzato, e sotto li volti e nelli muri son dipinture, e la chiesa è saleggiata di pietre vive bellissime messe insieme. Ha sette cappelle, che son poste tutte con le spalle verso il levante, con li suoi altari ben adornati [...] Ha questa chiesa gran circuito saleggiato do gran pezzi di pietra viva [...] il qual circuito ha d'intorno molto gran muri ed è scoperto.'

⁶ A reconstruction of the plan of the basilica of Māryām Şeyon at Aksum was also drafted in 1906 by von Lüpke during the Deutsche Aksum Expedition (Girma Kidane & Wilding: 21).

⁷ Conti Rossini 1909–10; Lusini 2003.

⁸ Buxton & Matthews.

⁹ Lewcock: 80–83.

¹⁰ de Goeje: 934 ff.

¹¹ Evetts: 300–01; for the text of al-Tabarī see the English translation of Clifford E. Bosworth: 217 ff.

¹² Conti Rossini 1928: 238, pl. XXXV, fig. 109; Phillipson 1997: 73–87, fig. 95; Curtis: 287–88; Phillipson 2009: 40–42

¹³ Alvarez: fol. 204 v. Based on the Italian translation of the account of the travels of Francisco Alvarez published for the first time in Portuguese in 1540: 'A questo luogo di Chaxumo [...] sono edificate due case sotterranee, nelle quali non si può entrare senza lume: queste non sono in volto, ma son fatte di bellissime pietre lavorate tutte eguali così dalle bande come di sopra [...] et tanto son bene uniti detti sassi, che paiono d'un pezzo, et non si vedono le commessure [...] et sopra dette case è la campagna.'

¹⁴ Anfray & Annequin: 65–86, pl. XXXVIII; Phillipson 2009: 47, fig. 59.

¹⁵ Conti Rossini 1909–10: 54–58; Lusini 2003: 185–86.

¹⁶ Conti Rossini 1909–10: 7; Monneret de Villard 1938: 27; Buxton & Matthews: 66; Eigner: 53.

¹⁷ Tekle Hagos 2008.

¹⁸ A right-angled triangle whose perimeter measures 12 units, with sides of respectively 3 and 4 units and a hypotenuse of 5 units.

¹⁹ Conti Rossini 1928: 230.

²⁰ Markham; Anfray 1970: 31–56

²¹ De Contenson 1961: 39–60; Leroy: 94–95; Phillipson 2009: 43.

²² Monneret de Villard 1938: 52.

²³ Phillipson 1997: 83, fig. 109; 85, fig. 113.

²⁴ Eigner.

²⁵ Phillipson 1997: 187, fig. 268.

²⁶ Alvarez: 203v–204: 'made with vaults'.

PART II

The Architecture of the Late-Aksumite and Post-Aksumite Basilicas of Tigray *(Eighth–Twelfth Century)*

Map II

Location of the late-Aksumite and post-Aksumite basilicas of Tigray (eighth–twelfth century).

Brown lines indicate the main watershed ridges; red lines indicate minor watershed ridges.





Through an analysis of the ruins of the early Aksumite basilicas, specific frames of reference have been formulated that are useful for the interpretation of identifiable characteristics of architectural evolution that have emerged across the period encompassing the sixth and seventh centuries.

In addition, it is possible to identify other relevant characteristics of the architecture of this period through examination of later achievements, when it is likely that Aksumite buildings were still standing, perhaps in a state of ruins, but still offering a reference or model for builders to make use of.

A series of basilicas which scholars generally assign to a period between the eighth and twelfth centuries retains some distinctive and typical features which – in terms of plan and elevation – were deeply rooted in the Aksumite tradition. Every precise chronological positioning, in any case, seems problematic, given the shortage or, in fact, the total absence of historical documentation relating to the Ethiopian basilicas of this period.

In fact, the application of particular construction techniques, along with other characteristics and stylistic-decorative features, confirms a specific habit of reference to pre-existing models; but the formal aspects of these models were accorded more value than the structural.

The basilicas constructed during the extended period encompassing the gradual decline of the Aksumite Empire therefore incorporate to a marked degree many previously existing elements (for example the interlocking corners built of alternating layers of stone and wood, the metope-style friezes found on the architraves, etc.), but they nonetheless present structural innovations which embody certain characteristics that both interpret and reflect in purely formal terms the particularities of the models whose influence is encoded within them.

So the observation of the faithful application of certain particular features, or a gradual movement away from them, could imply a tentative system of dating. Certain features were maintained, while others were progressively updated. When we compare the basilicas, however, we do not observe a homogeneity of resolutions, but a mere typological reference, since the diverse range of structural, stylistic and decorative elements observable in the surviving ancient basilicas means that each of them is its own unique entity. The most thorough scholarly studies undertaken to date generally indicate that the ancient basilica of Dabra Dāmo Endā Abuna Aragāwi (Figure II-1), built on a perilously accessed cliff in northern Tigray, and situated close to the border with Eritrea along the traditional routes leading from Aksum to the Red Sea, is, in fact, one of Ethiopia's oldest surviving basilicas.

The Built Basilicas

Though it has been subjected to various alterations over time which have led to its present configuration, a proximity to earlier models derived from Aksum seems to be implied by the remains of foundations similar to those of the Aksumite podia on the northern side, beyond the precisely rectangular outer wall of the building.

The archaic character of the outline of the masonry enclosure confirms the close relationship with the Aksumite 'school' as it evolved in the second half of the seventh century,¹ with the typical protrusions and recesses on the exterior, designed to give a symmetrical image to the facades along the axes of the hall (apart from the protrusion of the north-east corner and the vestibule, undoubtedly added after the original layout). And on the inside, the conforming rectilinear pilaster strips were accordingly placed to support the beams of the roofing of the lateral aisles.

The walls built above ground, with sequences of stones contained by and alternating with wooden planks held in place by interlocking 'monkey's-head' insertions, evoke the traditional image already represented in the stelai of Aksum (Figure II-2).

Figure II-1. Plan of the basilica of Dabra Dämo (from Buxton 1970: 98, fig. 17)

Figure II-1

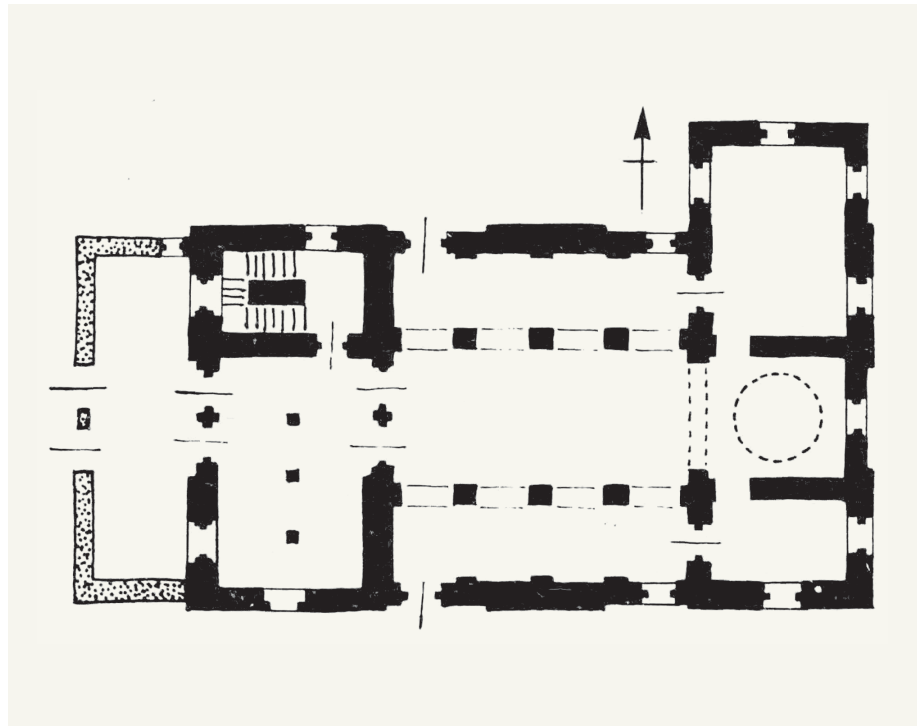




Figure II-2

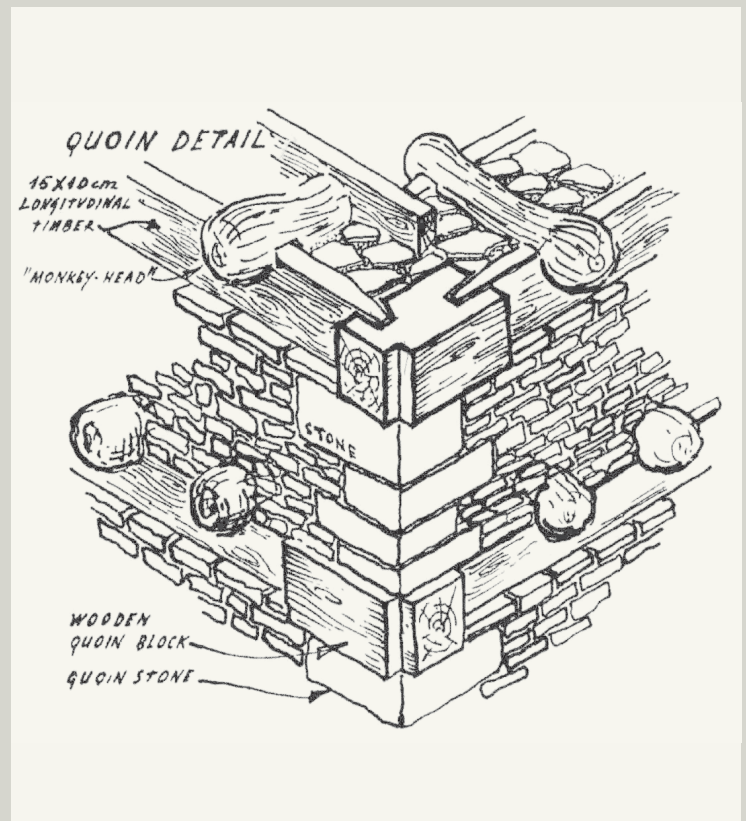


Figure II-3



Figure II-4

Figure II-2. External facing of the basilica of Dabra Dämo Endä Abuna Aragāwi (photograph: Michael Gervers)

Figure II-3. Masonry construction system (from Matthews & Mordini, fig. 12)

Figure II-4. Capital in the vestibule of the basilica of Dabra Dämo (photograph: Michael Gervers)



Figure II-5

Figure II-5. Pillars inside the basilica of Dabra Dämo (from Buxton 1970, pl. 53)

Figure II-6. Cross section of the basilica of Dabra Dämo (from Buxton 1970: 98, fig. 17)

But an axonometric three-dimensional drawing created by Matthews and Mordini to illustrate the masonry structure shows how the boards/planks (not beams) overlaid at intervals at the sides of the masonry interlock at the corners in solid blocks of wood shaped in such a way as to simulate the 90° interlock of two beams (Figure II-3).² This is in keeping with a typical phenomenon whereby the formal aspects of a construction which was originally based on a different arrangement continue to be reflected.

The axial access to the hall is introduced by a narthex, reduced in width by the stairwell leading to the upper level, perpetuating the model shared by all the basilicas featuring galleries.³ The beams that intersect on the ceiling are supported by pillars with bevelled corners, with a stepped collar of the Aksumite type and rounded corbel capitals, extending beyond the quarter circle, with abacus (Figure II-4).⁴

The proportions of the hall approximate those of a square which has then been divided by pillars into three aisles, each comprising four spans. The first of these is accessed directly from the exterior. The internal pillars, made from a single piece of stone

Figure II-6

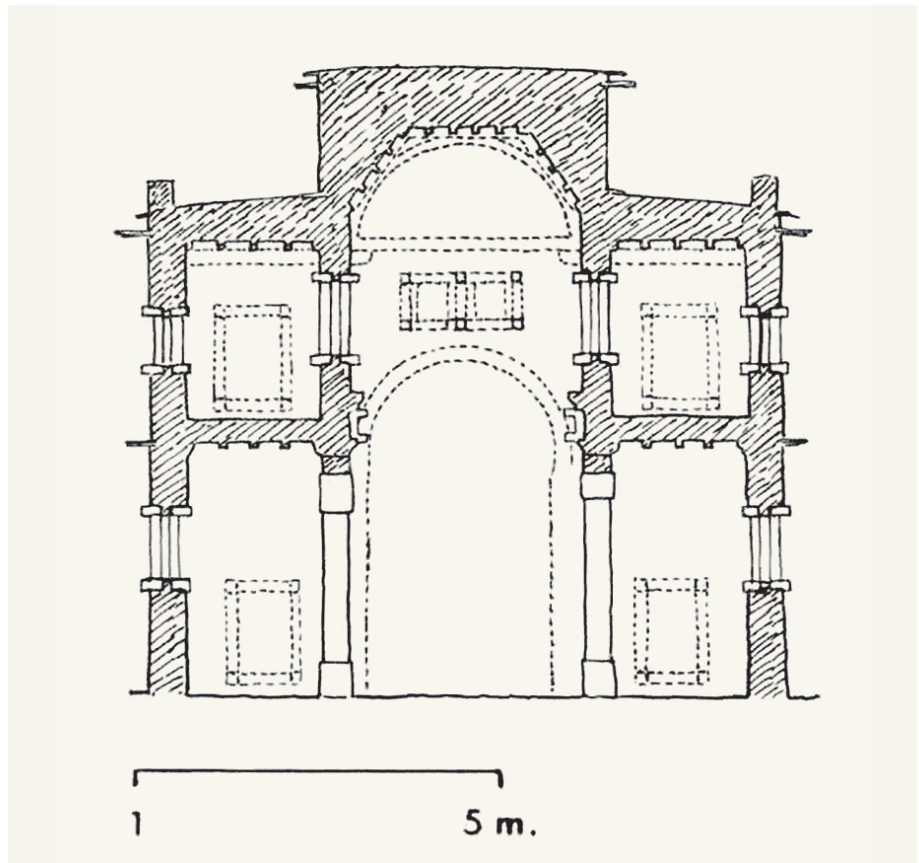




Figure II-7

Figure II-7. Roof of the central nave of
Dabra Dämo prior to its destruction in 1948
(from Buxton 1947)

Figure II-8. Triumphal arch of the basilica of Dabra Dämo (from Matthews & Mordini, pl. Vb)

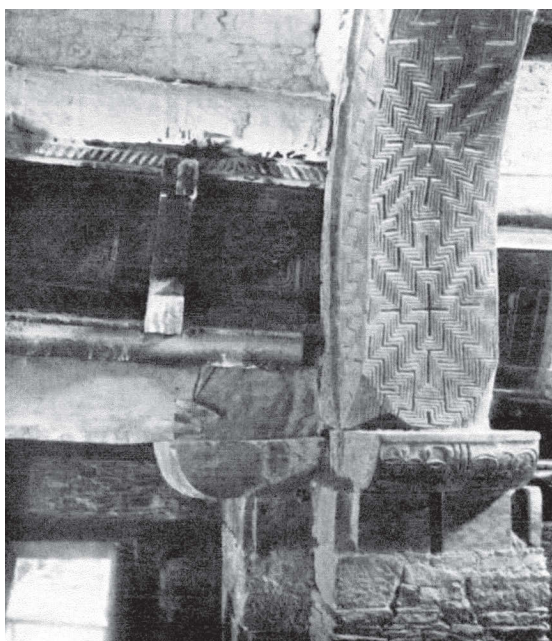


Figure II-8

Figure II-9. Wooden framework of the dome of the apse of Dabra Dämo during restoration in 1948 (from Matthews & Mordini, pl. VIIa)

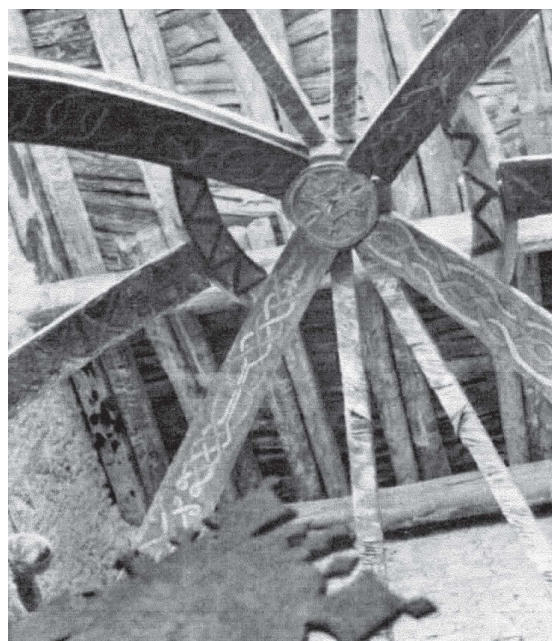


Figure II-9

and featuring a cubical capital, also suggest the possibility that they were salvaged from pre-existing Aksumite constructions (Figure II-5). A serial metope frieze runs along the architraves, but is not continued on the short sides of the central nave. In fact, the *raison d'être* of this frieze – which would continue to be utilized for centuries as a formal-stylistic feature in the basilicas of Ethiopia and in Ethiopian architecture more generally – most probably originally came from the need for the resolution, with a standardized motif, of the connection on the architraves of the beams supporting the roof of the lateral naves. And, indeed, the frieze is placed at the same level. In this way, *mutatis mutandis*, the series of triglyphs and metopes of the Greek temples were adapted from an original wooden structure into stone, in which the triglyphs are reminiscent of the heads of the beams that rested on the architraves, and the metopes that of the panels placed between them.

The central nave rises with openings in the outer wall – the clerestory – to bring light to the innermost part of the hall, though filtered through the galleries built over the lateral aisles (Figure II-6).

A photograph taken in 1947 by David Buxton shows the overlay of certain rather contradictory aspects of the roof of the central nave, proving the existence of alterations made in successive phases, which are still difficult to place in chronological order (Figure II-7). In fact, a roof with a trapezium section, characteristic of trusses placed on the central nave of other enhanced basilicas,⁵ seems to have been overlaid on structures that were clearly based on a different original conception. Buxton's

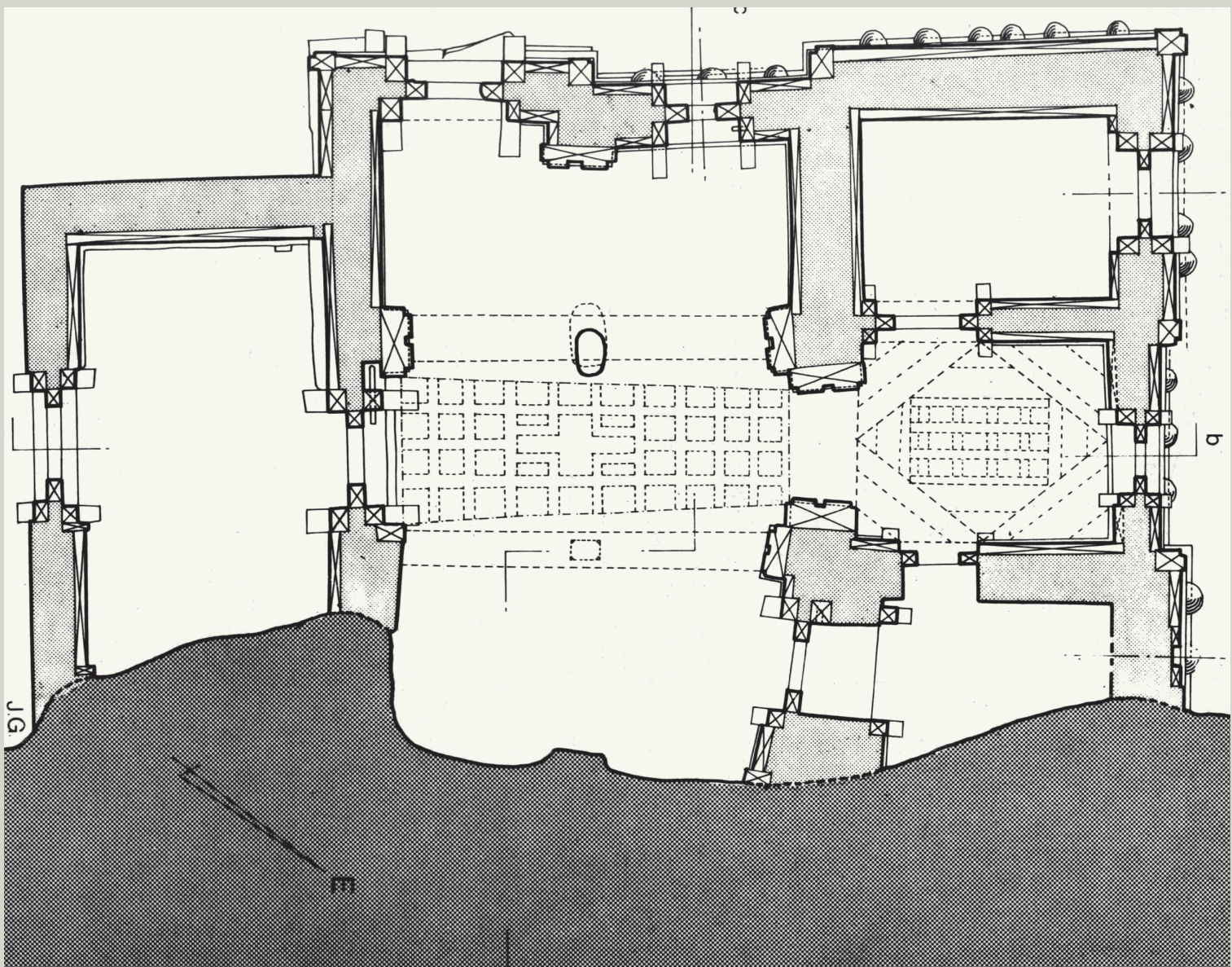


Figure II-10

Figure II-10. Plan of the basilica of 'Agawo Qirqos (from Lepage, 1975: 43)

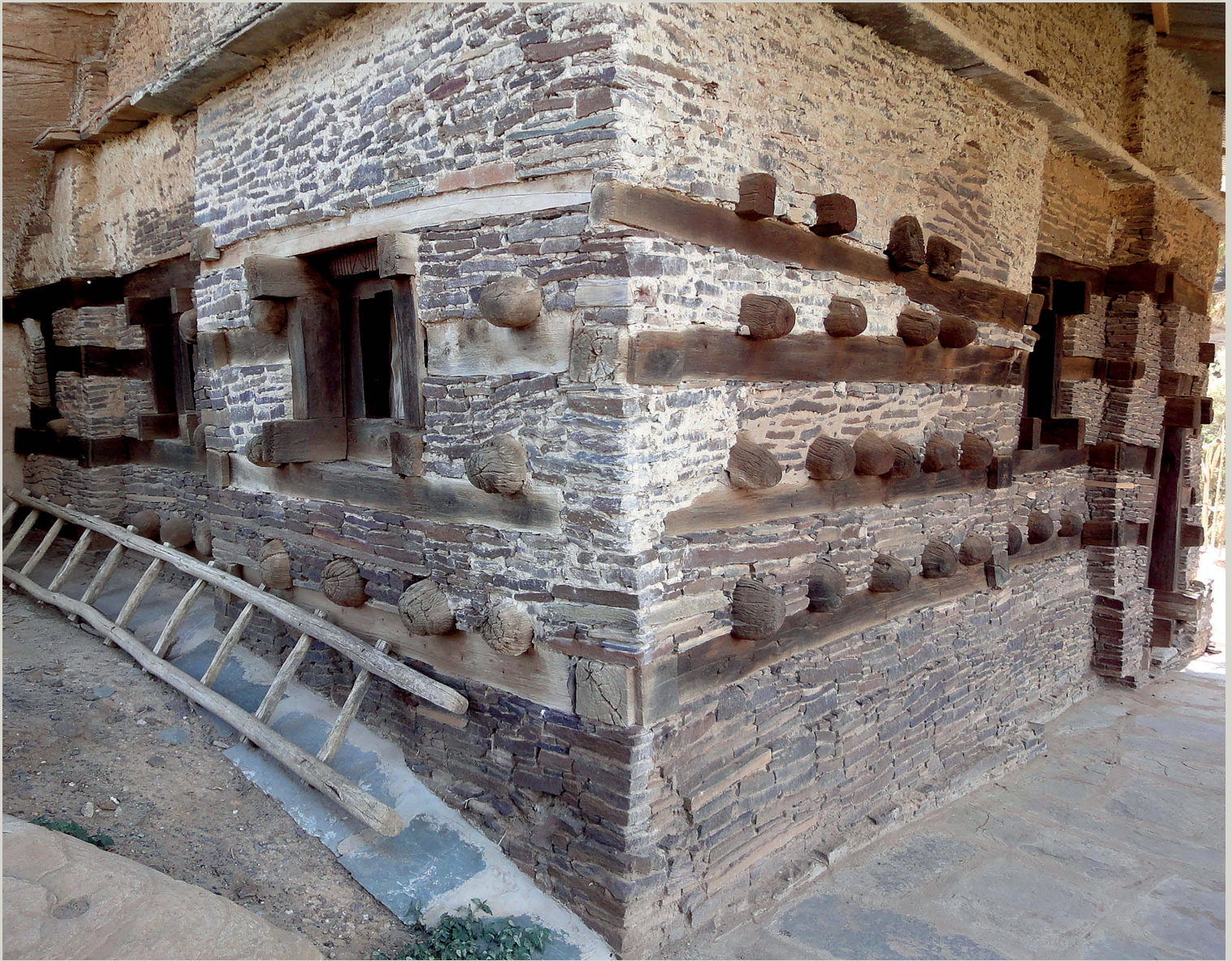


Figure II-11

Figure II-11. Wall facing of 'Āgawo Qirqos, with demonstrable differences that indicate interventions/modifications in different periods (photograph: Mario Di Salvo)

photograph makes it possible to deduce that the central nave of the basilica could have been covered by a wooden barrel vault, with large ribs artfully cut like arches arranged in succession, then bridging the arched shape.

The type of vault would therefore seem to point to the type found in the much later basilica of Žammadu Māryām (Figure III-52).⁶ The large arched ribs appear to be linked at the base by wooden ties to counter the lateral thrusts of the vault, also countered and absorbed by the roofs of the galleries inside the basilica. With a height of just 1.5 metres, the galleries would be relatively inaccessible for use and were obviously conceived precisely for the intended purpose of providing additional support. This was depicted and documented in Buxton's 1947 photograph, but the configuration was later completely altered.

It should also be noted that the triumphal arch leading to the sanctuary is also fashioned out of wood (Figure II-8), and decorated with carvings featuring

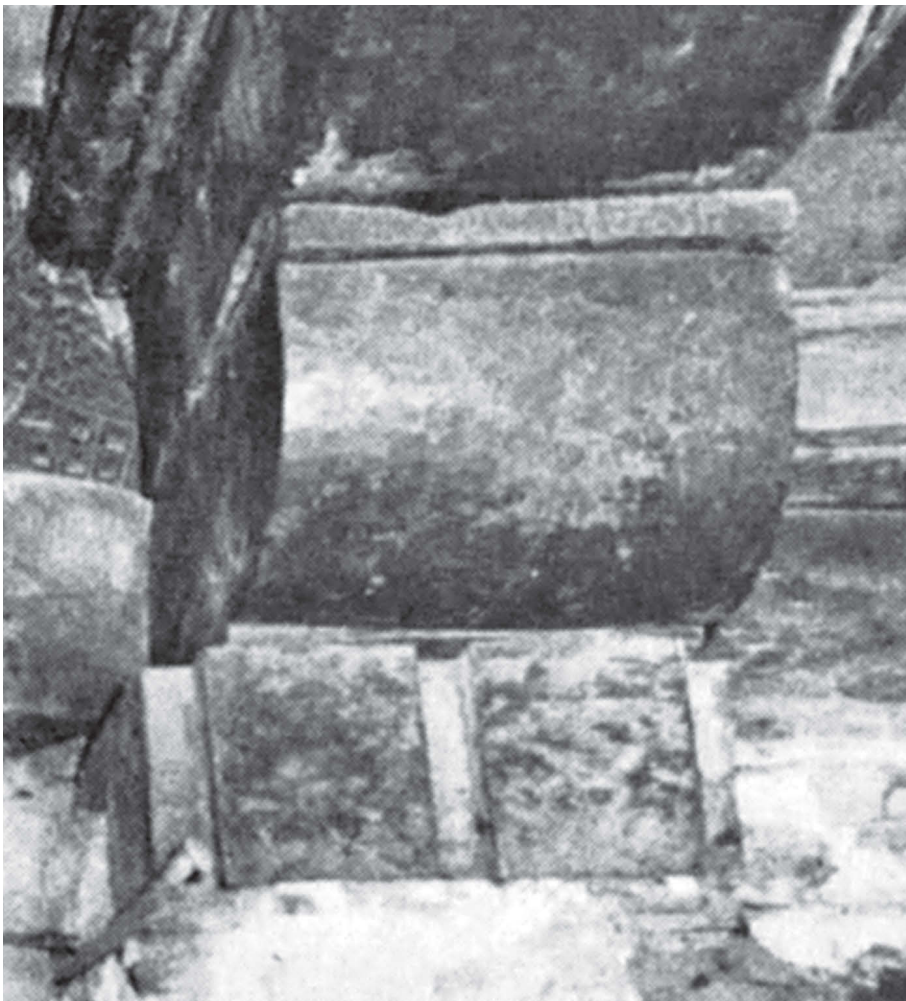


Figure II-12

Figure II-12. Capitals of the basilica of 'Agawo Qirqos (from Lepage 1975: 41)

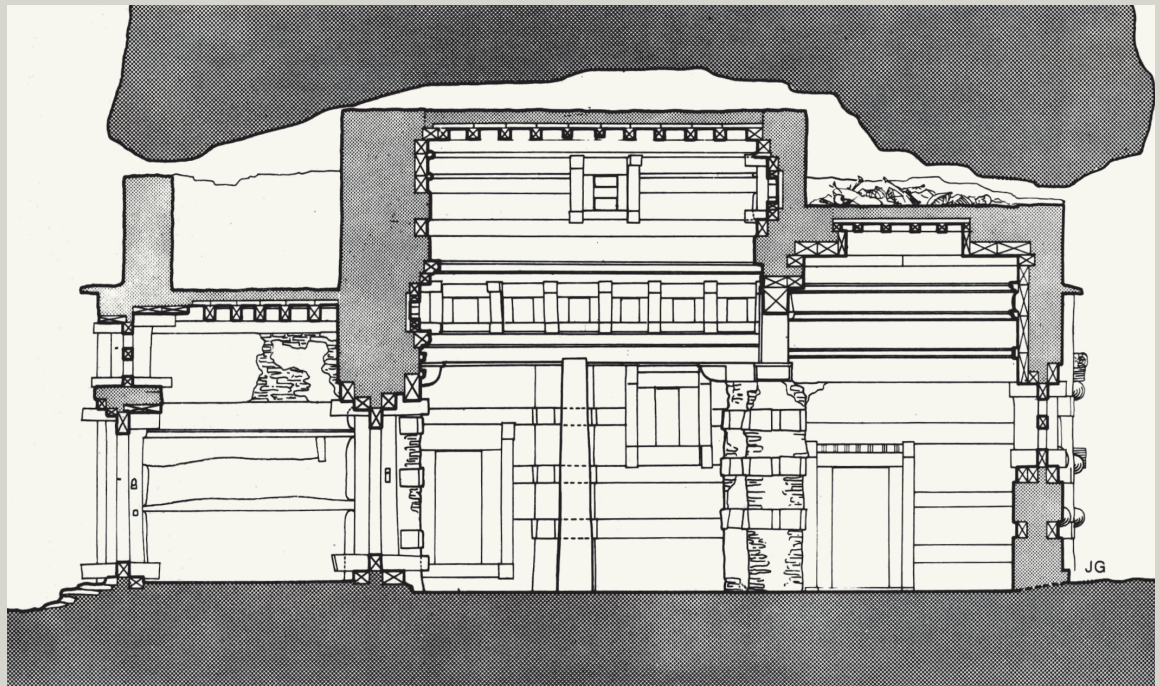


Figure II-13

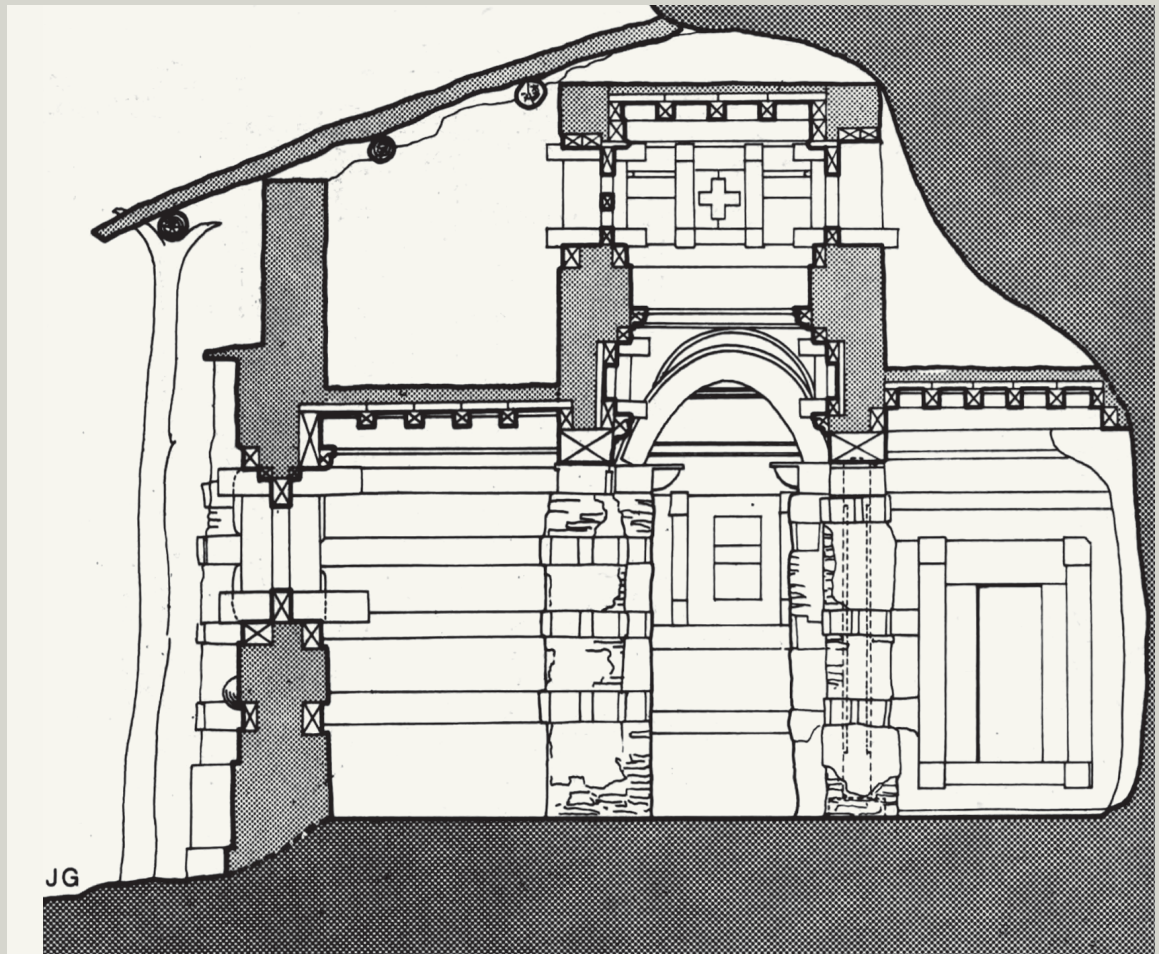


Figure II-14

Figure II-13. Longitudinal section of the basilica of 'Agawo Qirqos (from Lepage 1975: 42)

Figure II-14. Cross section of the basilica of 'Agawo Qirqos covered by a protective canopy (from Lepage 1975: 42)



Figure II-15

Figure II-15. Triumphal arch of the basilica of 'Agawo Qirqos (from Lepage 1975: 41)

motifs similar to the types of ornamentation that recur in other basilicas (Figure II-38) as well as in Coptic art. The arched ribs of the spoked dome of the sanctuary are also made of wood (Figure II-9).⁷ It can therefore be seen that the arches, vaults and domes originating from the application of particular masonry techniques are, instead, significantly constructed using carpentry techniques that might be more plausibly attributed to experienced shipwrights.

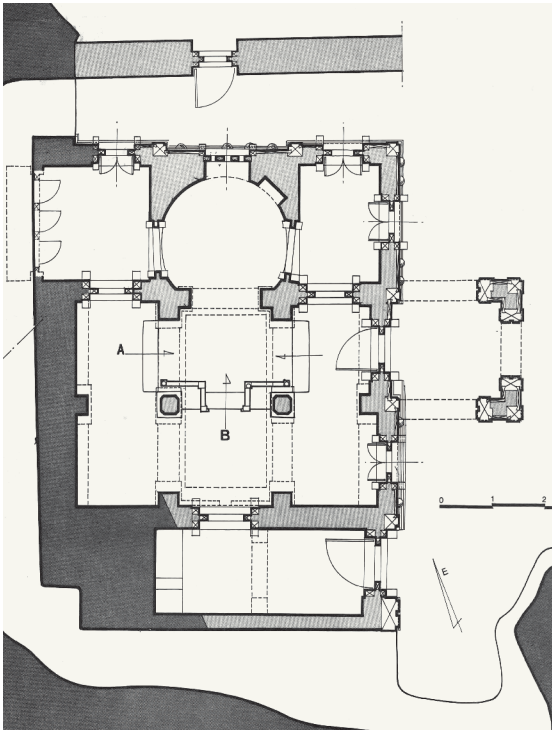


Figure II-16

Figure II-16. Plan of the basilica of Dabra Salām Mikā'el (from Lepage 1975: 58)

Figure II-17. Masonry facing displayed on a podium at Dābrā Sālām Mikā'el (photograph: Mario Di Salvo)



Figure II-17



Figure II-18



Figure II-19

Figure II-18. Detail of the exterior masonry of Dabra Salām Mikā'el (photograph: Mario Di Salvo)

Figure II-19. Corner block of the exterior masonry of Dabra Salām Mikā'el (photograph: Mario Di Salvo)

Figure II-20. Portico of the basilica of Dabra Salām Mikā'el (photograph: Mario Di Salvo)



Figure II-20

With a quadrangular plan (as already documented in antiquity⁸), the spaces that flank it are connected not only with the sanctuary, but also with respective lateral aisles.

Further south, in an area with a radius of about 20 km, just to the north of 'Aṣbi in the Wambartā, almost on the edge of eastern Tigray, three small basilicas were built, which share the unique feature of halls that are no longer square, but have three aisles extending for two spans, thus making them wider than they are deep. This similarity might perhaps be explained by their geographical proximity. Nevertheless, the particular characteristics of each would seem to indicate a different chronology, a different echelon of clientele and the work of craftsmen with different types of experience, in terms of construction and style. Of these Āgawo Qirqos (Figure II-10)⁹ was built against a cliff that partially overshadows it,

Figure II-21

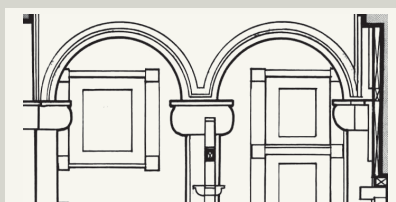


Figure II-21. Detail of the longitudinal section of the basilica of Dabra Salām Mikā'el (from Lepage 1975: 59)

Figure II-22. Longitudinal section of the basilica of Dabra Salām Mikā'el (from Lepage 1975: 59)

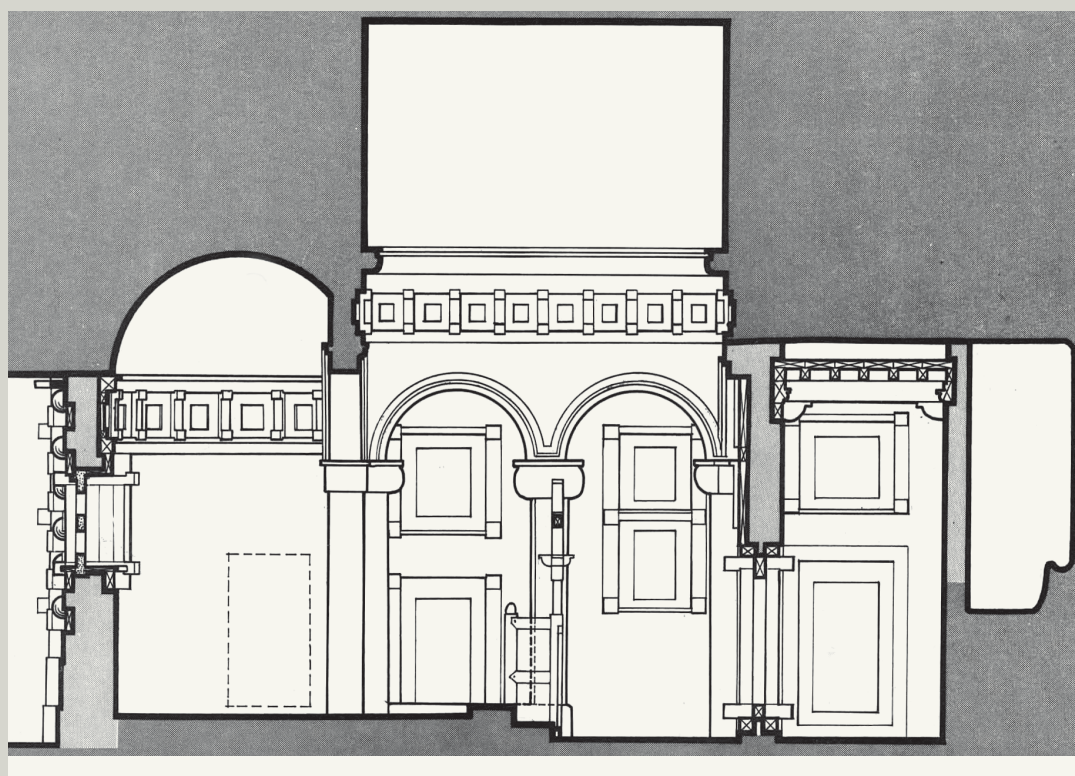


Figure II-22

Figure II-23. Cross section of the basilica of Dabra Salām Mikā'el (from Lepage 1975: 59)

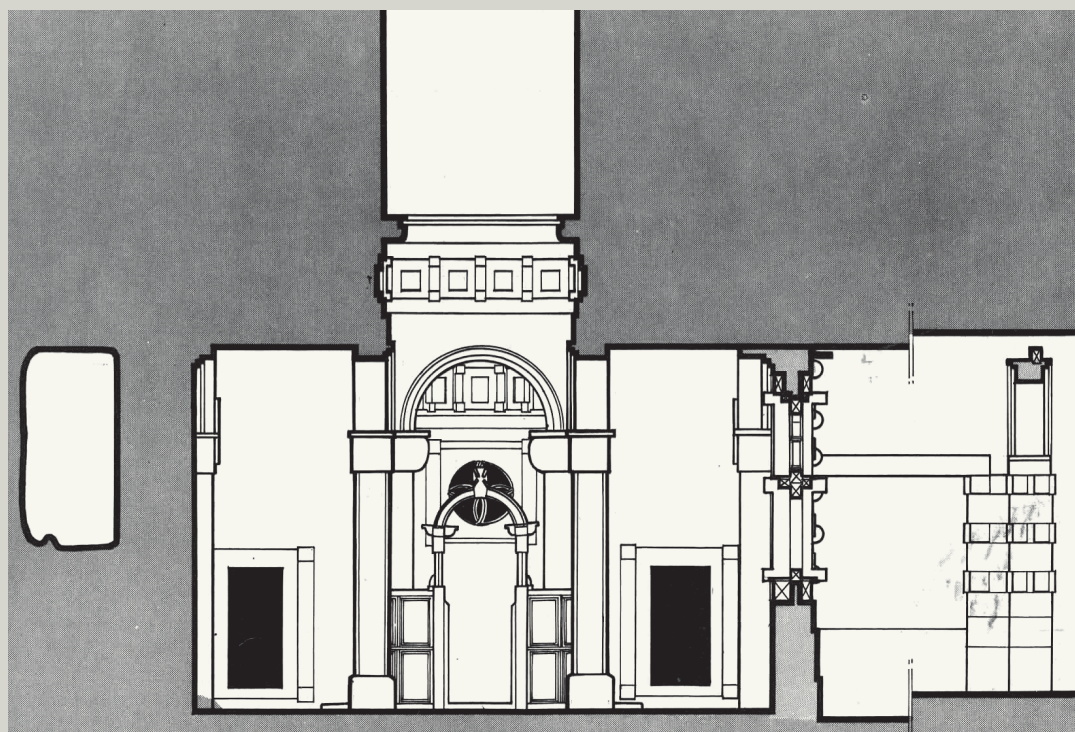


Figure II-23

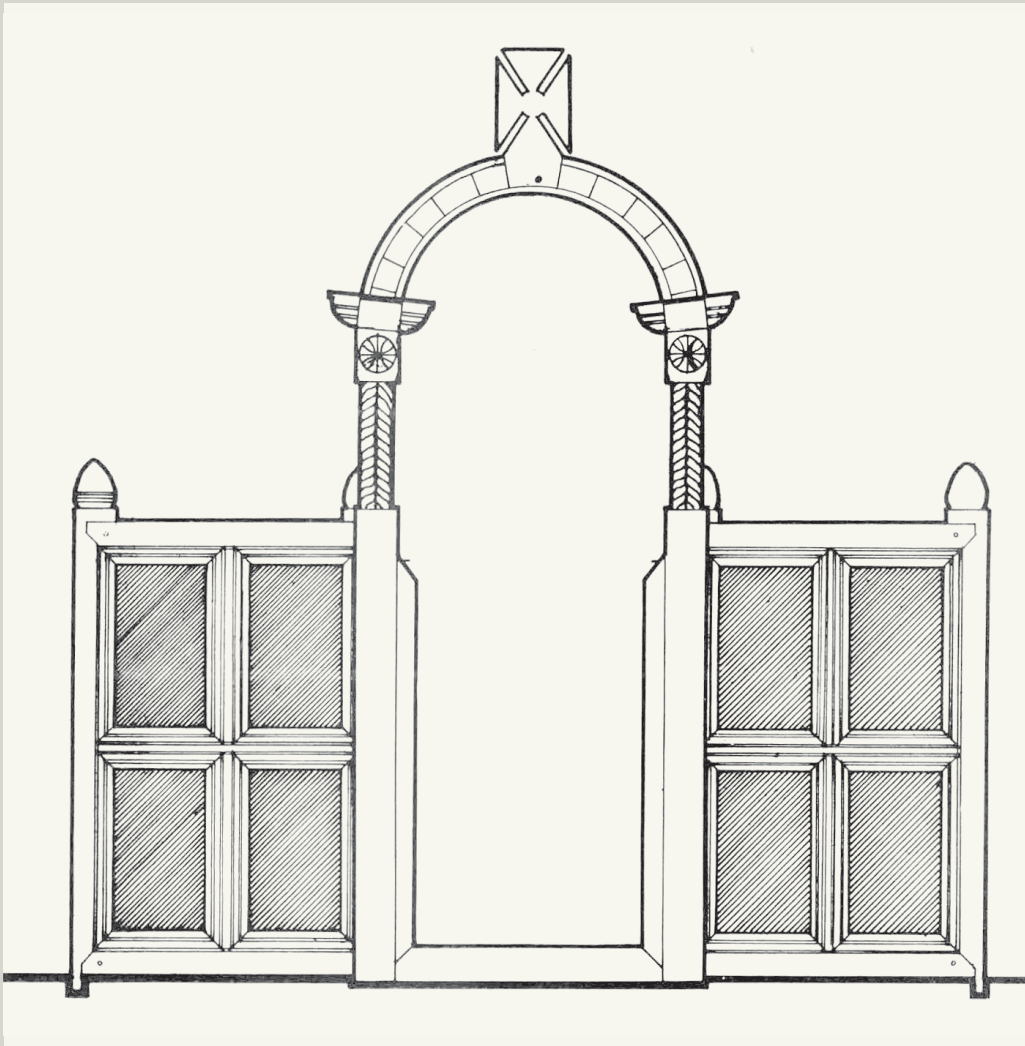


Figure II-24



Figure II-25

Figure II-24. Transenna in the basilica of Dabra Salām Mikā'el (from Lepage 1975)

Figure II-25. Detail of the transenna in the basilica of Dabra Salām Mikā'el (photograph: Mario Di Salvo)

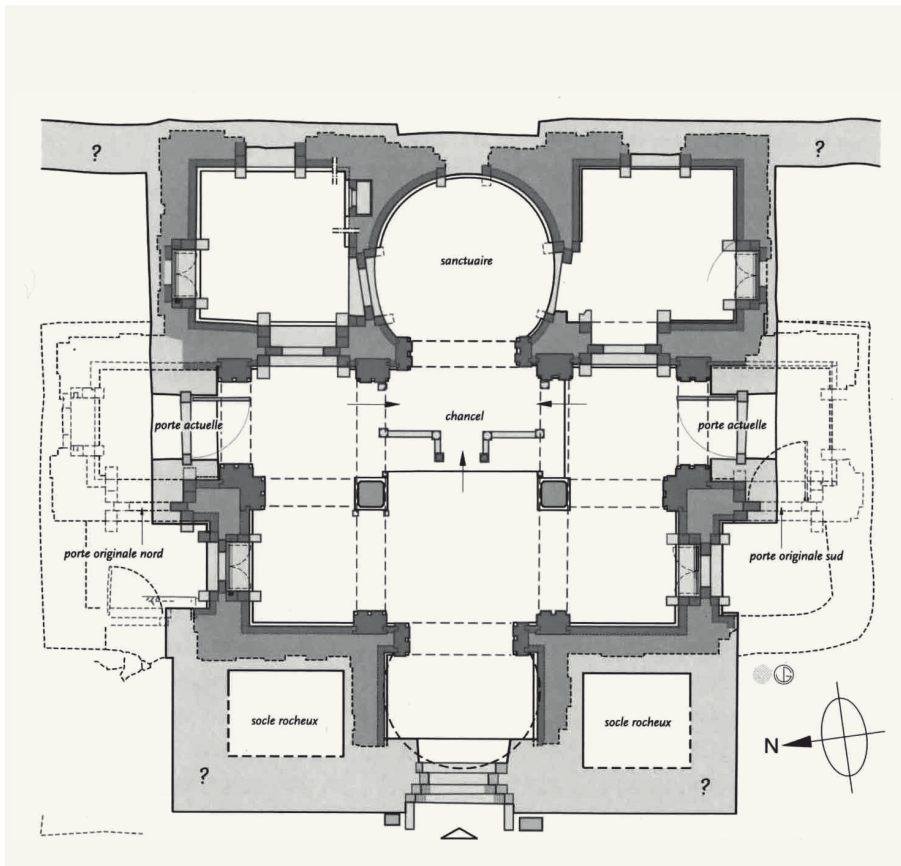


Figure II-26

Figure II-26. Plan of the basilica of Zarēmā Giyorgis (from Lepage & Mercier 2005: 64)

Dabra Salām Mikā'el (Figure II-16),¹⁰ was partially constructed and partially sculpted into the rock that contains it, while Zarēmā Giyorgis (Figure II-26)¹¹ is unfortunately now incorporated into a new structure that prevents observation from the outside.

It is doubtless significant to observe that in the basilica of Āgawo Qirqos the original outline of the masonry enclosure is still in evidence, with the protruding and recessed parts also corresponding inside the hall (Figure II-10), indicating that the origin of its design is even earlier than that of the basilica of Dabra Dāmo Endā Abuna Aragāwi, since, in effect, it is typical and characteristic of the very oldest constructions of the Aksumite era.

The vertical masonry walls of Āgawo Qirqos – though having undergone a number of alterations – are built according to the traditional method, with irregular courses of stone alternating with ribands of wood held in place by crossbars (the 'monkey heads'), interlocked in the typical solid wooden corner blocks (Figure II-11).



Figure II-27

Figure II-27. Detail of the transenna in the basilica of Zarēma Giyorgis (photograph: Michael Gervers)

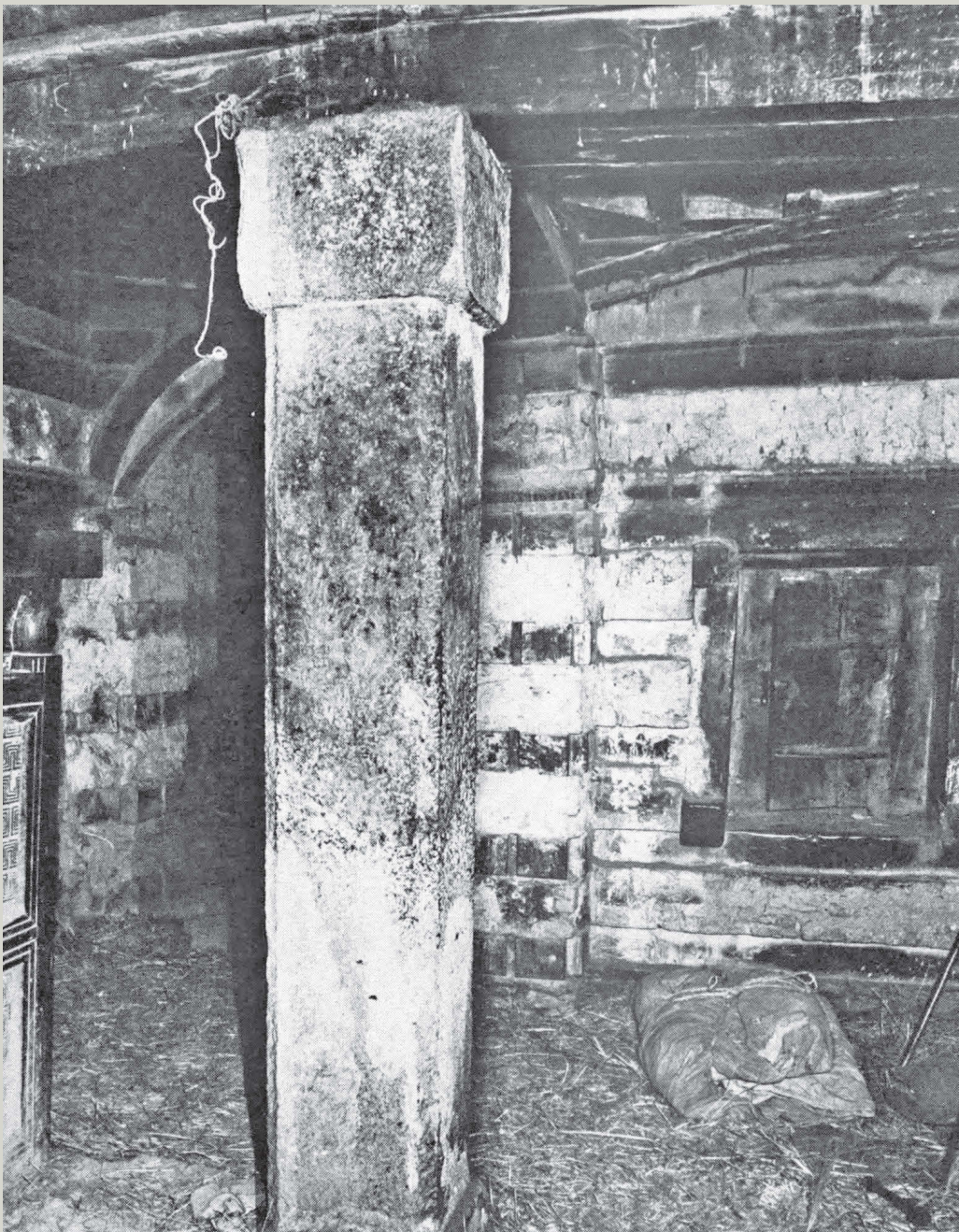


Figure II-28

Figure II-28. Pillar inside the basilica of Zarēmā Giyorgis (from Lepage 1975: 36)

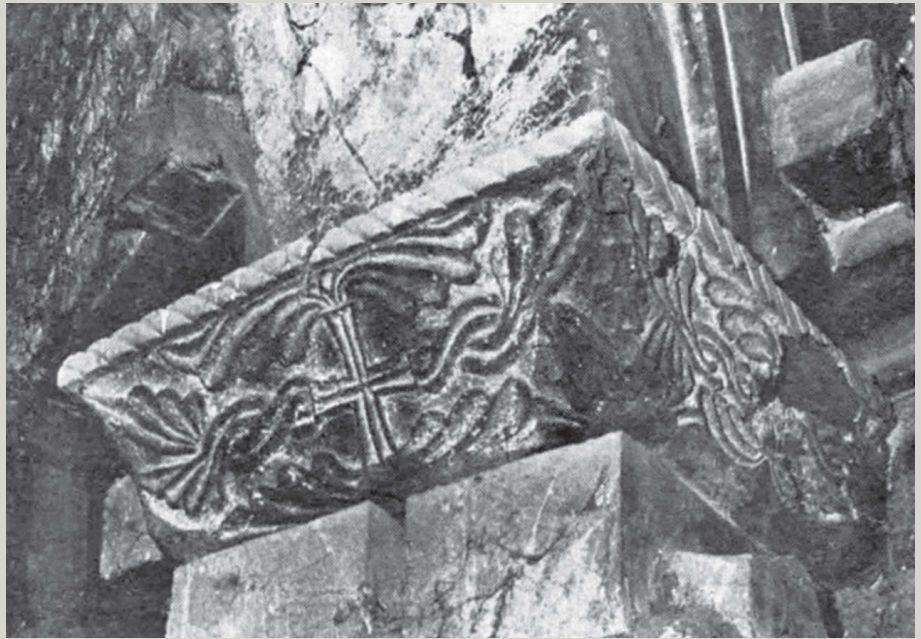


Figure II-29



Figure II-30

Figure II-29. Capital supporting the triumphal arch of the basilica of Zarēma Giyorgis (from Lepage 75: 40)

Figure II-30. Capital supporting the triumphal arch of the basilica of Zarēma Giyorgis (from Lepage 75: 37)

Access to the hall is from a narthex (not contemporary with the original layout) and laterally only from the northern side at the first span, since the southern side of the basilica is set completely up against the rock.

The architraves that divide the hall into three aisles rest on wooden pillars and pilaster strips with wooden corbel capitals featuring a quarter circle and abacus (Figure II-12). At the height of the coffered ceiling of the lateral aisles, a serial metope frieze is located along the central nave, with the clerestory above. The frieze, in keeping with its structural logic, does not extend along the short sides of the central nave, which is covered by a simple coffered ceiling, due to its narrow width (Figures II-13, II-14).

On the back wall the triumphal arch, featuring inlaid wood and set on wooden corbel-capitals (Figure II-15), leads to the sanctuary whose quadrangular plan evokes those of the most ancient Aksumite models. The ceiling has a wooden framework made with overlaid quadrants, incrementally decreasing in size and rotated by 45° over each other to gradually reduce the span between the supports,¹² in a similar manner to those found in the basilicas of Dabra Dāmo Endā Abuna Aragāwi and Zarēmā Giyorgis.

The area beside the sanctuary to the north can be accessed only from the sanctuary while the space to the south is also connected to the southern aisle, facing the congregation.¹³ It is virtually a hybrid phase of transition.

In the basilica of Dabra Salām Mikā'el (Figure II-16), a semi-underground construction since it is partially encapsulated within the bedrock, the masonry component that rises on a stepped base is reminiscent of the Aksumite podia, though it is visible only from the exterior (Figure II-17).

For the chronological placement of the basilica, it also seems helpful to note that – as at 'Agāwo Cerqos – the original layout of the masonry enclosure is still identifiable, with the inner protrusions and recesses also corresponding to the oldest constructions of the Aksumite era, though reinforced here by additional pilasters. The north side, excavated in the rock, is instead rectilinearly cut with pilasters.

The walls conform to the traditional format and are built with rows of perfectly squared stones – instead of mixed stones – cut specifically to accommodate the inclusion of the 'monkey heads' protruding from the bands of wood that fit at the corners with the solid wood blocks that simulate the 90° interlock of two beams (Figures II-18, II-19). Such a refined masonry arrangement is intended principally for its figurative value, far more than for any static or functional value, which in any case would not be applicable here, given the undersize dimensions of the basilica.

Figure II-31. Cross section of the basilica of Zarēmā Giyorgis (from Lepage & Mercier 2005: 68)

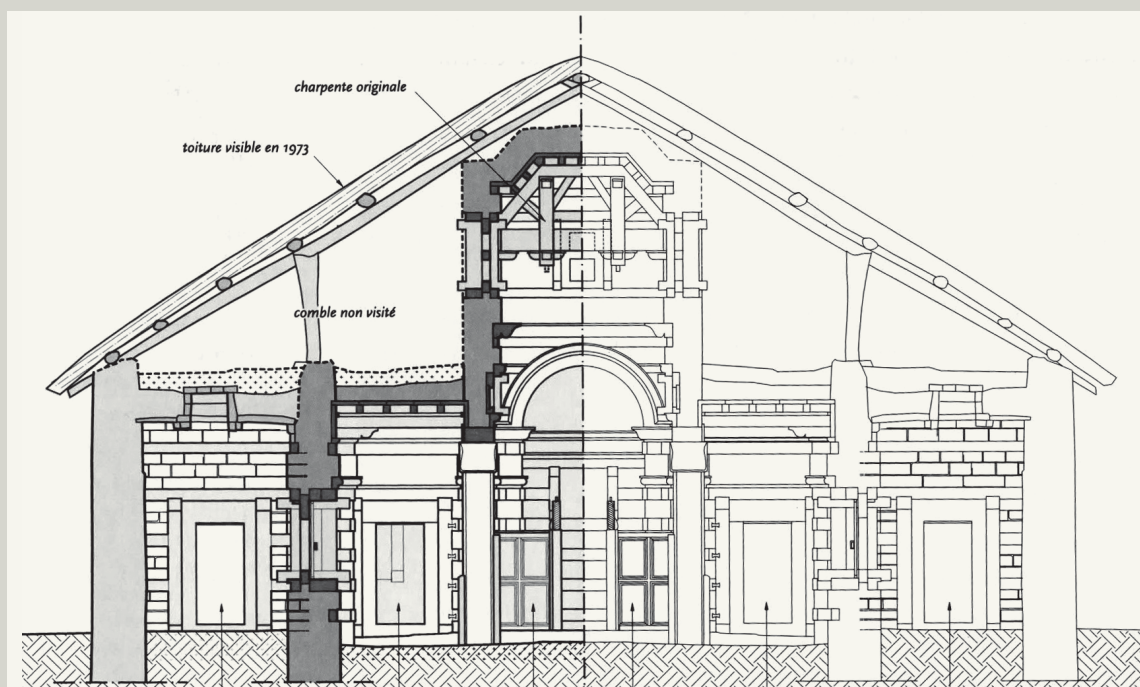


Figure II-31

Figure II-32. Longitudinal section of the basilica of Zarēmā Giyorgis (from Lepage 1975: 39)



Figure II-32

Entry to the basilica is from the south, to a narthex as wide as the first two aisles, since the portion of the cliff corresponding to the northern nave has not been excavated (Figure II-16). Therefore, although without galleries, this basilica makes precise reference to the type of narthex reduced in size by a stairwell leading to an upper level, demonstrating the enduring nature of this model as a design option.¹⁴

It is interesting to note that the lateral entrance which admits the visitor from the south at the second span of the hall is preceded by an arched portico, open at the sides (Figure II-20) to underline its majesty.

Inside the hall itself, there are arches set on monolithic pillars and the capitals have a conspicuously rounded profile extending beyond the quarter circle (Figure II-21), nearly analogous to those found in the narthex of Dabra Dāmo Endā Abuna Aragāwi (Figure II-4). Closed arches have been created along the inside of the outer walls.

The arches are surmounted by an ornamental series of metope friezes sculpted into the rock that encapsulates the basilica, and therefore free of any structural functions to the point of not corresponding to the level of the ceiling of the lateral aisles. It also extends along the smaller sides of the central nave, and even adorns the walls of the sanctuary. Excavated in the rock at an exaggerated height compared to the lateral aisles, the central nave is necessarily without windows that would bring light to the interior space (Figures II-22, II-23).

At the back of the hall the wooden balustrade of carved panels with recurring cruciform motifs still exists (Figures II-24, II-25), indicating a dating prior to the mid twelfth century, since balustrades are no longer to be found in later basilicas.¹⁵

Unmistakable reciprocal influences with Dabra Salām Mikā'el can be seen in the basilica of Zarēmā Giyorgis (Figure II-26): in the similar layout of the apse with an almost circular plan, again preceded by a wooden balustrade, and with the same spaces that flank it, open towards the lateral aisles and the sanctuary (Figure II-27). But in addition, the preliminary porticos that offer side access to the hall – through simple archways, again corresponding to the second span – somehow connect the built basilica of Zarēmā Giyorgis to that of Dabra Salām Mikā'el, though in this case the entrances are oriented towards the west and not set perpendicular to the axis of the hall, perhaps influenced by the situation of the path of access.

Observation of the plan of these preliminary porticoes has induced some scholars to interpret the basilica of Zarēmā Giyorgis as a cruciform layout, perceiving the development of the lateral vestibules as crosswise with respect to the longitudinal composition of the hall. There is, however, no corresponding

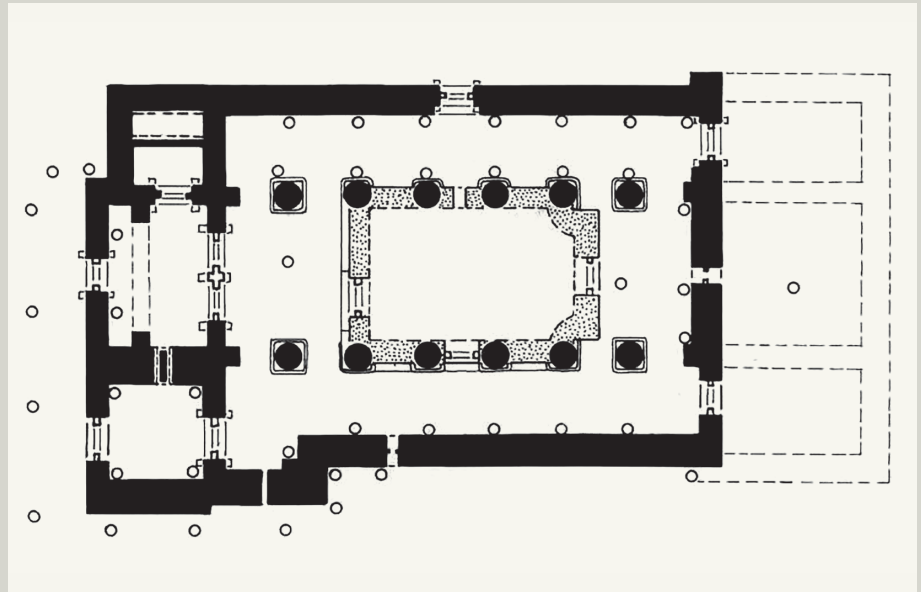


Figure II-33

Figure II-33. Hypothetical representation of the plan of the basilica of Asmara Endä Märyām (from Littmann et al.: III, 67)

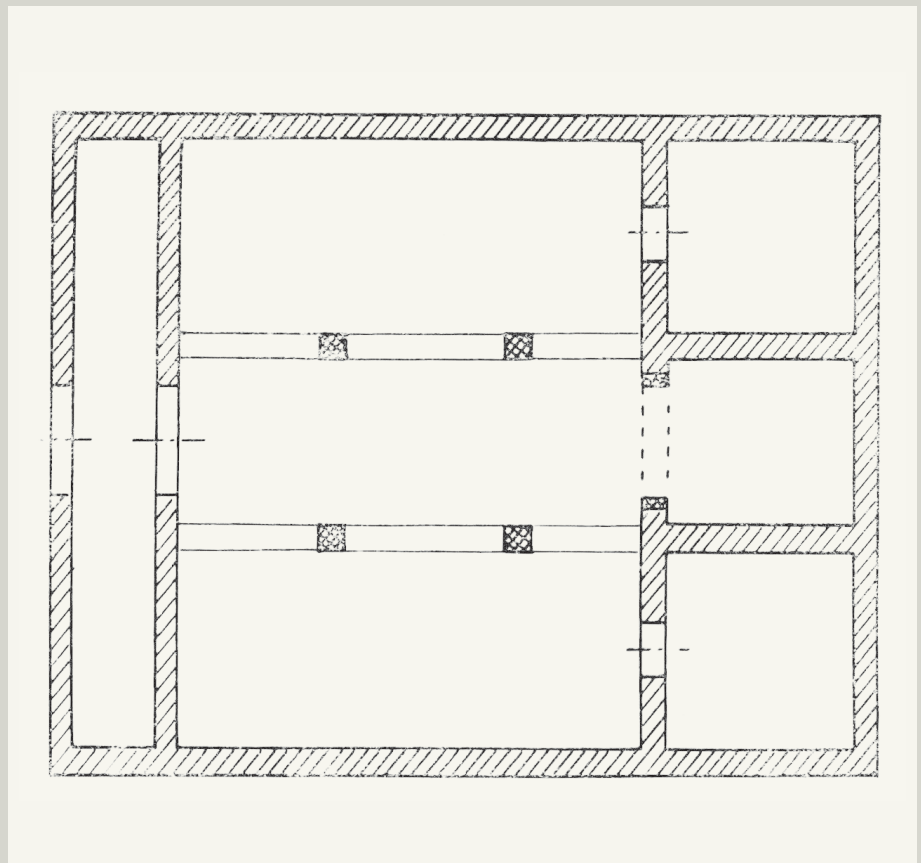


Figure II-34

Figure II-34. Diagram of the layout of the basilica of 'Arāmo (Mordini 1960: 42, fig.1)

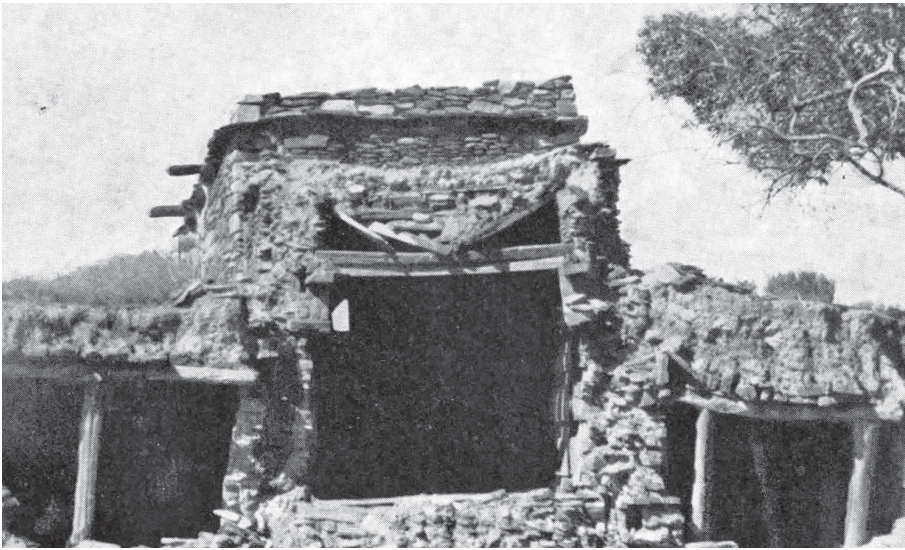


Figure II-35

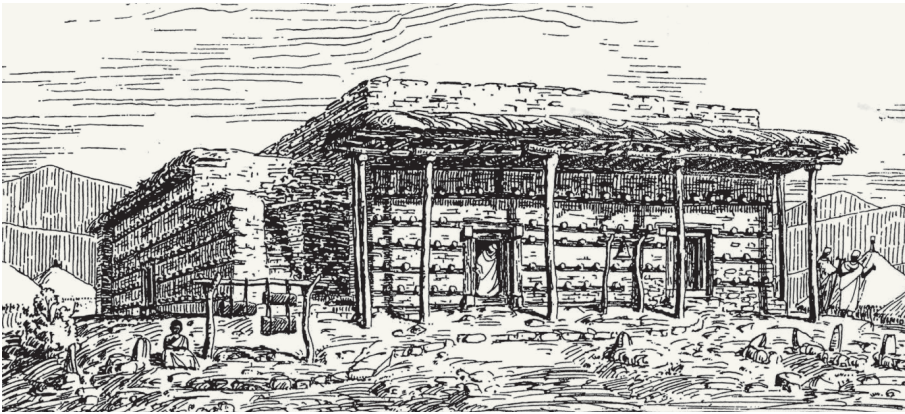


Figure II-36

Figure II-35. Remains of the basilica of 'Arāmo (Mordini 1960, pl. I)

Figure II-36. View of the basilica of Asmara Endā Māryām (from Littmann et al.)

transept in the internal space, which is configured as clearly longitudinal along the central nave, which has a roof level higher than the lateral aisles. The axial access, though almost concealed by subsequent modifications, seems at this point to be reduced to a simple atrium.

Unfortunately, it is only possible to capture a glimpse of the conception of the masonry structure of the basilica from the inside, and here again it is marked by the traditional mixed structure of alternating layers of stone and wood. The walls of the hall are rectilinear with pilaster strips, revealing a design closer to that of Dabra Dāmo Endā Abuna Aragāwi than to that of Āgawo Qirqos and Dabra Salām Mikā'el, where the latter displays a more archaic arrangement.

The internal pillars, still with a squared section bevelled at the edges, are constructed from single pieces of stone and may have been salvaged from previous Aksumite constructions, like those of Dabra Dāmo Endā Abuna Aragāwi

(Figure II-28). At the edges, however, the cubical capitals manifest a singular and subtle interpretation of the characteristic profile which in classical architecture is referred to as *cyma recta* due to its double concave /convex shape (Figures II-29, II-30).

The same marked profile is repeated in the capitals of the pilaster strips and wooden corbels supporting the trusses, indicating influences extraneous to the Aksumite tradition, enhanced by richly decorative carving based on various cruciform motifs. These are interpreted through a naturalistic approach that features palmettes and interlaced designs (Figures II-29, II-30) suggesting common, widespread decorative characteristics of the early Middle Ages in the Christian world.

On the architraves, the metope frieze does not extend to the short sides of the central nave, and is thus fully deployed as the finishing element of the interlock of the beams of the ceiling of the lateral aisles in the central nave. The latter was roofed with trusses with the distinctive trapezoidal profile featuring paired king posts (also found in later built basilicas¹⁶), capable of supporting only vertical loads on the masonry walls (Figures II-31, II-32) and thus guaranteeing their stability.

Regrettably the two basilicas of Asmara Endā Māryām¹⁷ and 'Arāmo,¹⁸ both located inside the borders of today's Eritrea along the traditional routes from Aksum to the Red Sea, have been destroyed.

From the surveys and descriptions made prior to the demolition of the basilica of Asmara Endā Māryām¹⁹ we can only partially imagine the original entity (Figure II-33), in spite of the commendable attempts to document it.²⁰ Similarly, it would be necessary to try to gain more precise indications from the sketchy description and very rough survey of the plan of the basilica of 'Arāmo destroyed in 1940–44 (Figure II-34). They had already been extensively altered over time. On the other hand, it does seem feasible to observe certain features of a process of evolution that in any case appears to retain ancient references.²¹

The drawings suggest that the outer walls of the two basilicas followed a masonry layout of constant thickness, with a rectilinear shape on two sides, i.e. without protrusions or recesses on the outside, and without reinforcing pilaster strips on the inside. Furthermore, in the eastern facade of the basilica of 'Arāmo we can even find a substantial innovation: the lack of the usual setback of the external wall of the sanctuary in between those of the adjacent service spaces.²² These peculiar characteristics became generalized and usual from the thirteenth century. In both instances, the basic stability of these basilicas could have been compromised from the outset by the inherent force of flat roofs resting on walls unsupported by protrusions and recesses and lacking pilaster strips, to the inevitable point of collapse and consequent demolition (Figure II-35).

In terms of elevation, the masonry suggests the traditional configuration, with layers of stones alternated with wooden boards held in place by 'monkey head' joints only partially penetrating the interior (Figure II-36).

The circular section of the pillars that divides the interior of the basilica of Asmara Endā Māryām into three aisles is highly unusual, with possible reference to what emerged from the excavation of the Aksumite ruins located in the Maṭarā region.²³ Equally atypical is the bevelled edge that does not continue for the full height of the wooden pillars of the basilica of 'Arāmo (Figure II-37), and replicates certain Aksumite models (Figure I-35). Furthermore, on these pillars, the corbel capitals supporting the architraves point to a substantial lack of understanding of their function, as they have been recklessly placed crosswise with respect to the architraves, instead of being positioned in order to reduce their length (Figure II-37).

In the basilica of 'Arāmo there is a narthex of limited depth but which is as wide as the hall, as is typical in basilicas without galleries. On the other hand, the narthex of Asmara Endā Māryām appears to have been deliberately narrowed by space that perhaps originally contained a staircase leading to an upper level. A central vestibule opens towards the nave and another towards the southern nave.

In the basilica of 'Arāmo the model of the square-plan sanctuary appears to prevail, with the neighbouring rooms opening only towards the lateral aisles. In the case of Asmara Endā Māryām it is not possible to theorize about the form of the presbytery zone, since it had already been destroyed at the time of the surveys. These do, however, indicate the existence of doors at the back of the lateral nave, allowing us to consider the existence of access to areas flanking the sanctuary. The sixteenth century saw the appearance in Amhara of centrally oriented churches, especially in circular form, with the *maqdas* at the centre. This feature also travelled to the region of Tigray, and in the basilica of Asmara too, the *sancta sanctorum* placed at the centre of the nave repudiates the traditional longitudinal layout.

The arches salvaged from the two basilicas, preserved at the Museum of Asmara, made with wooden tapped sectors, indicate the persistence of architectonic elements from the original buildings. These warrant further in-depth analysis, given that they have already been observed in other basilicas and continued to recur for centuries, with an ongoing mastery of the woodworking techniques, and the continuity of the carved decorative repertory embellished with a naturalistic or intertwined cruciform motifs (Figure II-38).

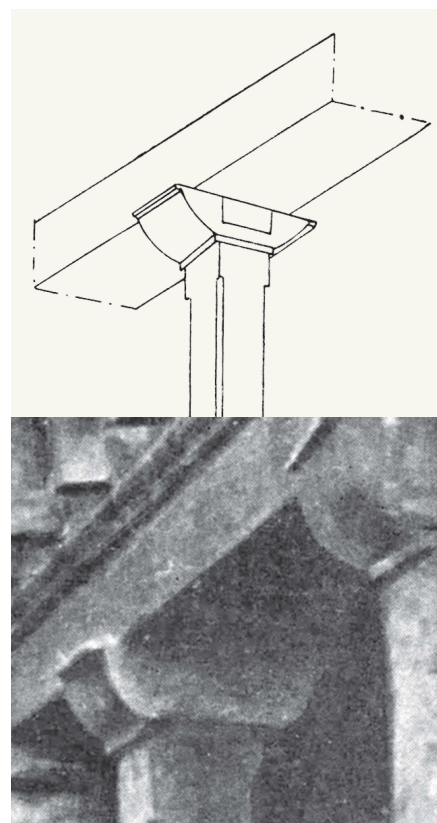


Figure II-37



Figure II-38

Figure II-37. Capitals of the basilica of 'Arāmo (from Mordini 1960, pl. II)

Figure II-38. Sectors of wooden arches from the basilica of 'Arāmo (from Buxton 1970: 97)

The Hypogeal Basilicas

The oldest underground basilicas were essentially created in a space that precisely reproduced the layout and structure of built basilicas, though they are devoid of the requirements of building above ground as compared to excavation/shaping inside a mass of rock. Despite being free of the structural constraints imposed by the techniques of assembly of materials, the underground basilicas still called for a preliminary idea or design that would determine in advance the dimensions of the whole and its parts, in order to avoid any possible errors during construction.

The frontal attachment to the rock, complying with the basilicas' canonical orientation, determined the positioning of the accesses – generally only from the west. Above all, the preliminary configuration of the hall had to be ascertained – the largest and therefore the most structurally demanding part of the basilica complex as a whole – subdivided into aisles and spans based on acceptable interaxis distances and on the rock formation out of which it would be excavated. The ratio of the length to breadth is generally more or less constant at about 1:1. Once the breadth had been identified, the length could be deduced, or vice versa. Some scholars tend to connect the square plan of the hall directly to the Aksumite tradition, rather than regarding it as simply the result of greater ease in the layout of the construction.

From the second half of the seventh century²⁴ onwards, in all the underground basilicas, the sides of the hall have a rectilinear form with pilaster strips, similar to those placed inside built basilicas in order to support the roof beams of the lateral naves.

The northern hypogeum of Dĕgum Šĕllāsē²⁵ (Figure II-39) essentially represents a basilica in miniature excavated from within a small rocky hill at the foot of the Gar'āltā massif, in eastern Tigray. Access is possible by means of a narthex, which was presumably covered and closed at the front by vertical masonry, as the north and south walls with pilaster strips are simply hollowed out from the existing rock.

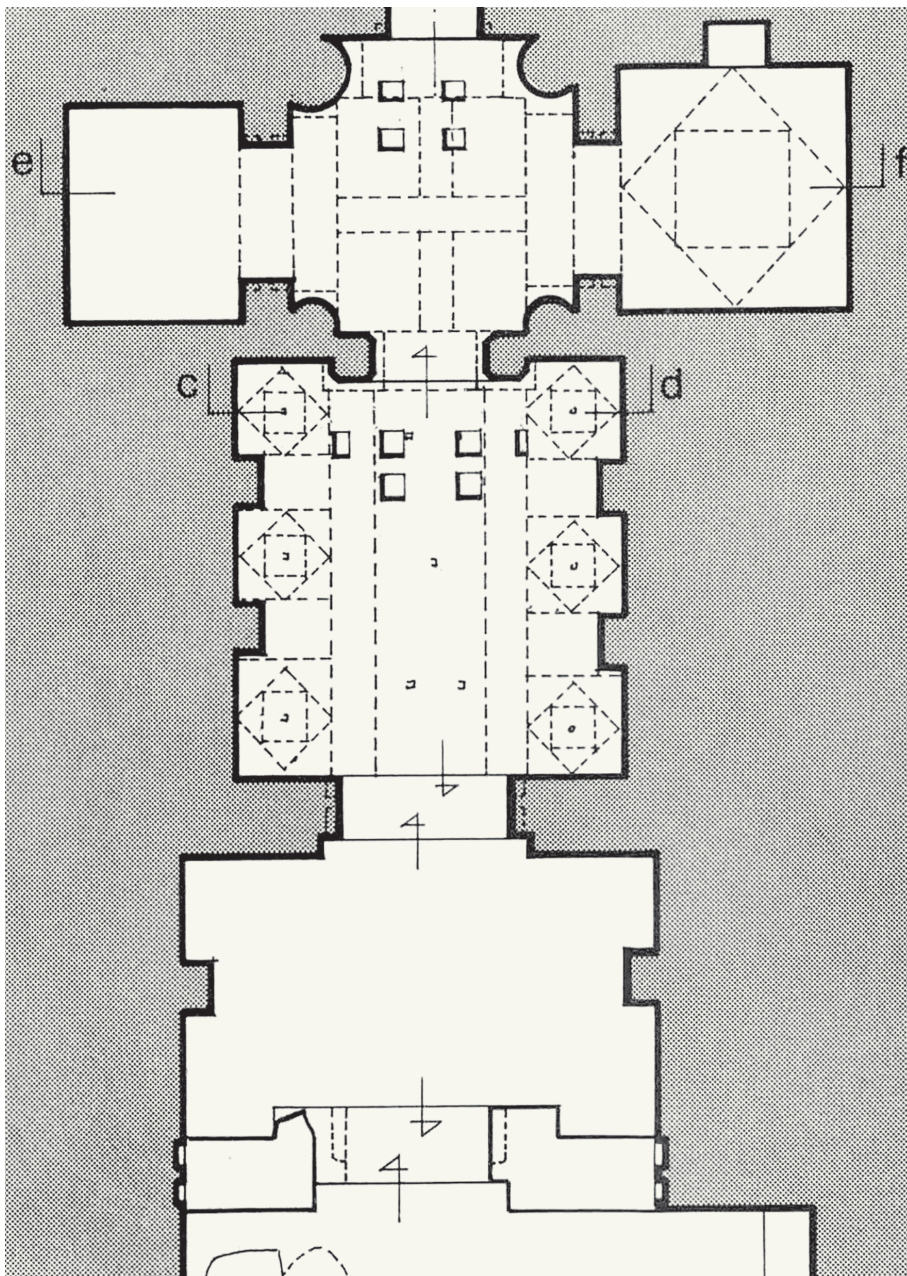


Figure II-39

Though without intermediate pillars, which were not required due to its size (about 3.4 x 3.4 m), the space of the hall is longitudinally divided into three aisles by two architraves into which the beams set on the pilaster strips at the sides of the hall are attached (Figure II-40).

The flat central ceiling is raised on simple moulding, but the elevation is relatively small, since the thickness of the rock would not have permitted anything higher. The lateral ceilings, on the other hand, imitate in stone the model of a wooden



Figure II-40



Figure II-41

Figure II-39. Plan of the northern hypogeum of Dægum Šëlläṣē (from Lepage 1975: 49)

Figure II-40. Interior of the northern hypogeum of Dægum Šëlläṣē (photograph: Mario Di Salvo)

Figure II-41. Interior of the hypogeum of Dægum Šëlläṣē (photograph: Mario Di Salvo)



Figure II-43

Figure II-42. Apse of the northern hypogeum of Dëgum Šëlläšë (photograph: Michael Gervers)

Figure II-43. Ceiling of the apse of the northern hypogeum of Dëgum Šëlläšë (photograph: Michael Gervers)



Figure II-42

framework made with stacked squares, gradually decreasing in size and rotated by 45° on each other to progressively reduce the span between the supports. (Figure II-41).

Today the floor reveals only traces of the holes in which the posts of a balustrade in front of the quadrangular sanctuary were placed. These could be described as almost Hellenistic due to the columns abutting the corners (Figure II-42). The flat ceiling reproduces a wooden structure in stone, simulating two



Figure II-44



Figure II-45

wooden beams crossed and nailed at the centre, with the extremities resting on the keystone of the blind arches sculpted in the walls. (Figure II-43).

In all probability, the relatively small size of the back of the hall did not permit the formation of openings at the sides of the triumphal arch, which is set on stepped capitals with the typical Aksumite profile. Therefore the spaces flanking the sanctuary were necessarily connected only to the sanctuary.

Pottery fragments found nearby were compared to the Aksumite fragments at Maṭarā, Aksum, and Adulis²⁶ and suggest that it is possible to tentatively date the settlement to this early period.²⁷

In addition, the typology of the baptismal font placed outside (Figure II-44) is similar to the one in use in Syria at the end of the fifth century (Figure I-19). Another is found outside the Aksumite basilica of Maṭarā (Figure I-8) and serves as a model for yet another at Yeha (Figure I-20).

Excavated within a small rocky mount in southern Wambartā in eastern Tigray, the entry to the small underground basilica of Gundafru Šellāsē²⁸ goes from a space with traces of structures of a built narthex, no longer extant.

Figure II-44. Baptismal font outside Dēgum Šellāsē (photograph: Mario Di Salvo)

Figure II-45. Nave of the basilica of Gundafru Šellāsē (photograph: Emmanuel Fritsch)

Figure II-46. Connection between the nave and the aisle of the basilica of Gundafru Šellāsē (photograph: Emmanuel Fritsch)



Figure II-46

Figure II-47. Plan of the underground basilica of Gāzēn Yohannēs Matmēq (from Plant: 139)

Figure II-48. Planimetric scheme of the presbytery area of the basilica of Gundafrū Šēllāsē (by E. Fritsch)

Figure II-47

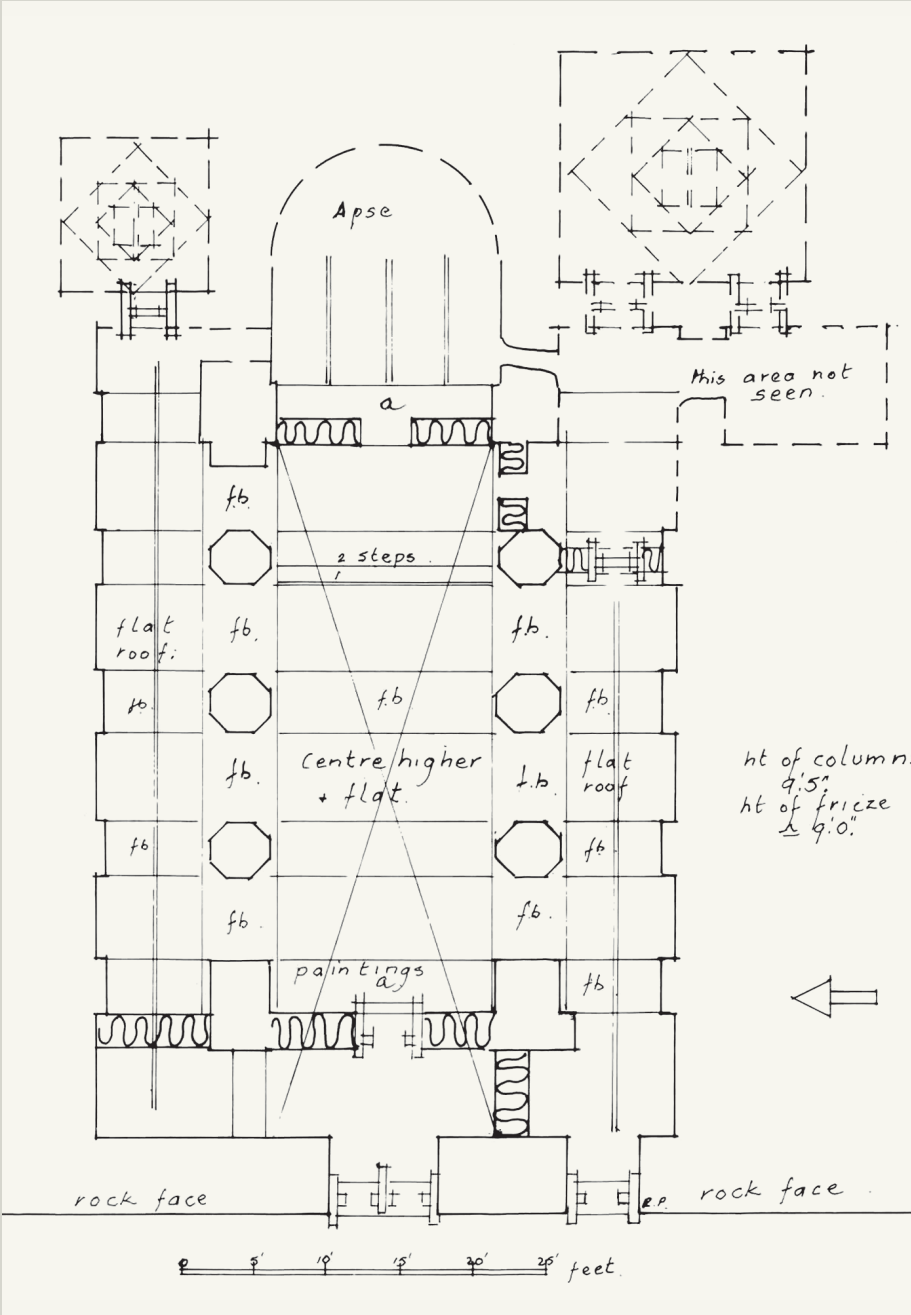


Figure II-48

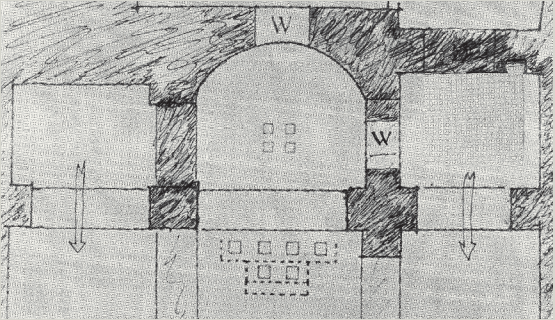


Figure II-49. Lateral aisle of the underground basilica of Gāzēn Yohannēs Matmēq (photograph: Michael Gervers)

Figure II-50. Approximate survey of the plan of the underground basilica of Hawzēn Takla Häymānot (from Plant: 176)

Figure II-50

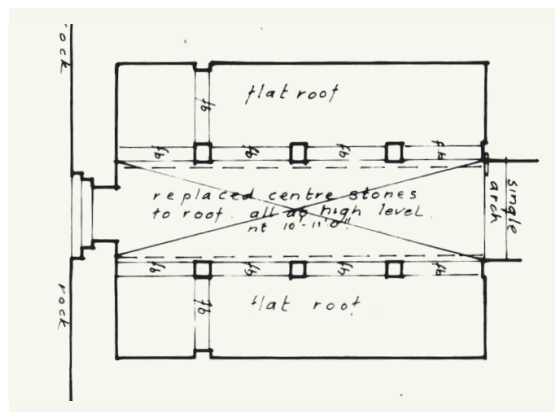


Figure II-49

The reduced depth of the hall, three aisles by two spans, was probably dictated by the shape of the site. The nave is marked by a intermediate pillar, summarily rough-cut; the lintels rest on this and, at the ends, on pilasters. They are surmounted by a coarse moulding directly above which rises the ceiling of the nave (Figure II-45). The outer walls are set rectilinear with pilasters on which rest the beams sharing the ceilings floors (Figure II-46), grafting of the aisles in the lintels.

Apparently significant are the holes set in the floor at the back of the hall: the foundations for a railing that separated the sanctuary, where four further holes indicate the location and size of the altar (Figure II-47). The rooms attached to the sanctuary open only to the aisles, the same plan that was manifest in the ruins of the oldest Aksumite basilicas.²⁹

There is a marked similarity between the measurements of the main Aksumite basilicas and the large underground basilica of Gāzēn Yohannēs Matmēq (Figure II-48),³⁰ excavated in the border region of Wambartā, in eastern Tigray, again with a hall substantially based on the square format, with four lateral aisles almost half as wide as the central nave – a noteworthy sign of its considerable antiquity.

Only in this basilica do the pillars – topped by simple parallel capitals that are a local evolution of the Aksumite cubical capital in compressed form – include such a pronounced edge bevel as to generate an unusual, almost octagonal, section.



Figure II-51

Figure II-51. Ceiling of the nave, basilica of Hawzēn Takla Hāymānot (photograph: Mario Di Salvo)

Figure II-52. Interior of the central nave of the underground basilica of Hawzēn Takla Hāymānot (photograph: Mario Di Salvo)

Figure II-53. Dome of the apse of the underground basilica of Hawzēn Takla Hāymānot (photographs: Mario Di Salvo)



Figure II-53



Figure II-52



Figure II-53

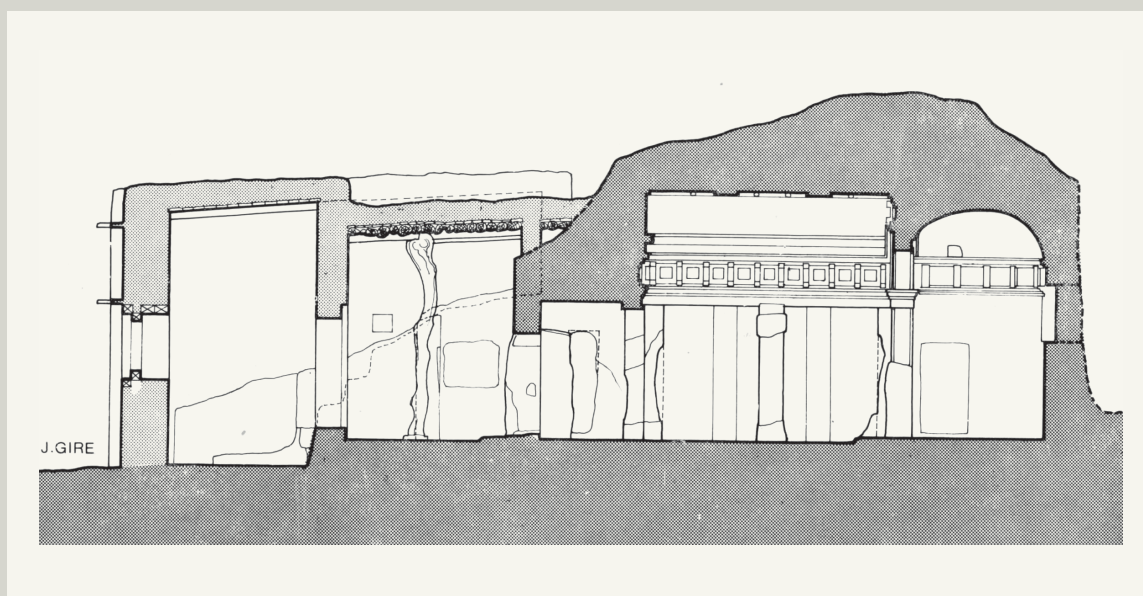


Figure II-54

Figure II-54. Longitudinal section of the basilica of Märyām Barāqit (from Lepage 1972, pl. XXVI)

Figure II-55. Plan of the underground basilica of Märyām Barāqit (from Lepage 1972, pl. XXV)

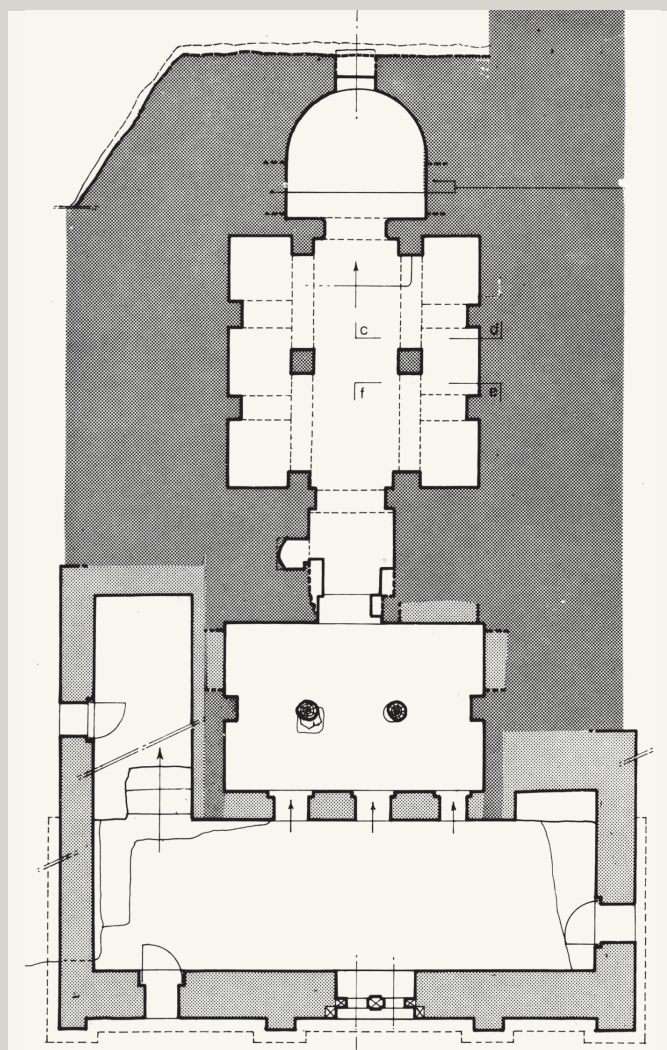


Figure II-55



Figure II-56



Figure II-57

Flat ceilings, sculpted with motifs to simulate large sheets of stone laid with joint covers in relief, cover the lateral aisles and central nave, with the latter raised on a sizeable moulding (Figure II-49).

In front of the apse with its semicircular back – in keeping with the model that developed from the end of the sixth century³¹ – there are now only traces of the holes in the floor in which the posts of a balustrade were once placed. The spaces beside it are open towards the lateral aisles, according to the arrangement that characterizes the ruins of the most ancient Aksumite basilicas.³²

Figure II-56. Interior of the basilica of Märyām Barāqit seen from the west (from Lepage 1972, pl. XXVIIb)

Figure II-57. Drawing of the facade of Wēqro Märyām Nabalat (from Mordini 1939: 524)

Figure II-58. Plan of the basilica of Wēqro Märyām Nabalat (from Gerster 1970: 127, fig. 98)

Figure II-58

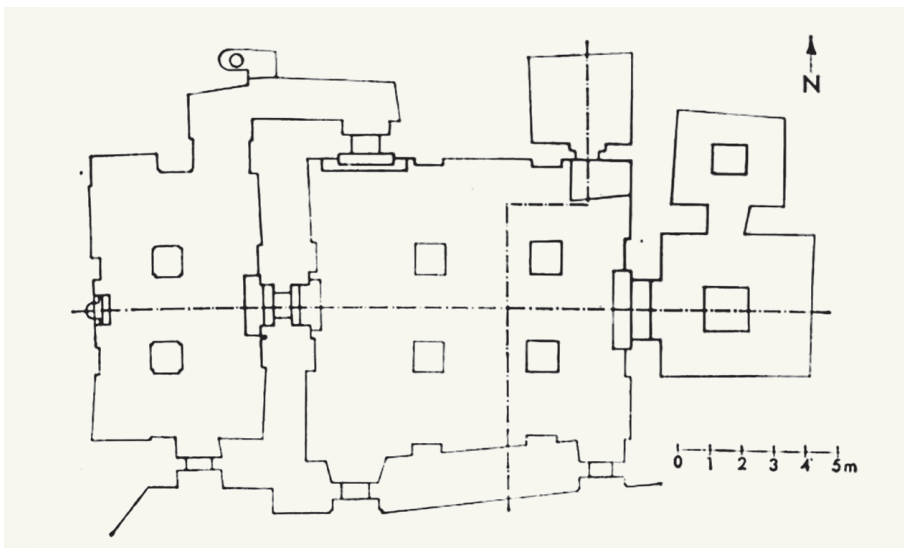




Figure II-59

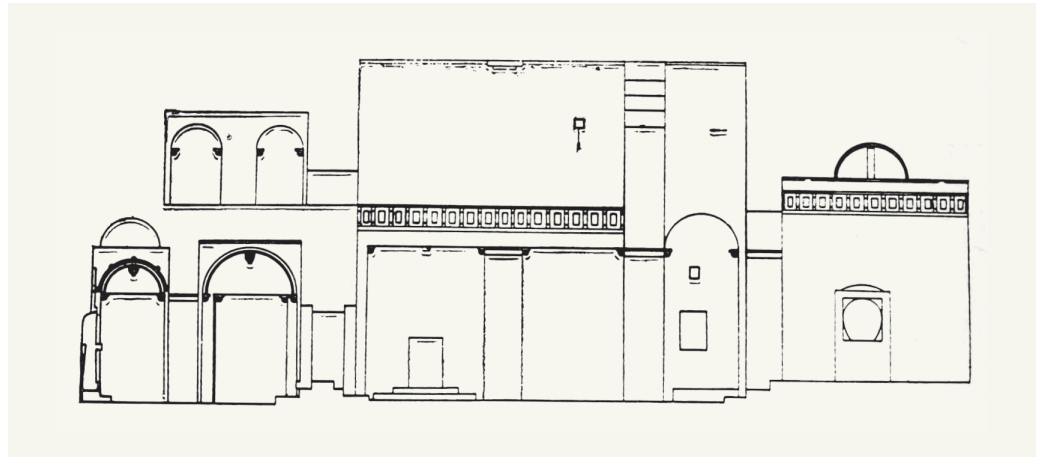
Figure II-59. Narthex of the basilica of Wēqro Maryām Nabalat (from Gerster 1970, ill. 171)

Figure II-60. Cross section of the basilica of Wēqro Māryām Nabalat (from Gerster 1970: 127, fig. 99)

Figure II-61. Longitudinal section of the basilica of Wēqro Māryām Nabalat (from Mordini 1939: 522)



Figure II-61



The basilica of Gāzēn Yohannēs Matmēq is distinguished by the presence of an endonarthex formed by the U-shaped turn of the lateral aisles along the inner front of the hall. Possibly it could be derived from the layout used in the Egyptian Coptic basilicas of the fifth–sixth centuries, where – in comparison to other regions – the influences of the models of the classical world survived longer. The Roman layout that permitted precisely such a U-shaped turn of the lateral aisles also serves as an example.³³

The underground basilica of Hawzēn Takla Hāymānot (Figure II-50),³⁴ excavated in the western sector of the region of Gar’āltā which also lies in eastern Tigray, has various stylistic characteristics and aspects in common with the basilica of Gāzēn Yohannēs Matmēq. It would appear that the proximity of local traditions

cannot be underestimated, given that this could help to determine, though in different contexts, particular influences on the workmen involved in the construction.

In both basilicas we can see a characteristic presence: the identical carving of the rock on the ceilings of the hall, imitating a roof made with stone sheets with raised joint covers (Figure II-51).

Though the hall has the typical structural arrangement, a comparison of the forms reveals a different interpretation of the pillars in the interior, which are less bevelled, and topped by capitals that feature an unprecedented reverse trapezoidal section (Figure II-52).

Above, a serial metope frieze is introduced on the architraves, inelegantly sculpted in the rock and without any protrusions at the corners. This turns back on the smaller sides of the central nave, revealing its figurative intentions (Figure II-52).³⁵

The semicircular apse (not unlike that of Gāzēn Yohannēs Matmēq, but connected to the spaces that flank it) is covered by an apse basin that reproduces the radial arched ribs in stone (Figure II-53) in keeping with the same model that was also the reference for the structure of the wooden dome of the apse of the basilica of Dabra Dāmo Endā Abuna Aragāwi (Figure II-9).³⁶

The small underground basilica of Māryām Barāqit (Figure II-54),³⁷ excavated from within a low rocky mountain slope emerging at the north-west extremity of the massif of Gar'altā in eastern Tigray, is instead influenced in certain ways by the relative proximity of the north hypogeum of Dēgum Śēllāsē.

It is introduced, in a similar manner, by a semi-underground narthex, with pilaster strips placed along the lateral walls and intermediate pillars, allowing the observer to assume that at the front it was enhanced by vertical masonry and a protective roof.

Then a small vestibule or passageway leads to a square hall with two bays. The structural logic of the built basilicas is replicated here in a more approximate way, with the intermediate pillars staggered with respect to the pilaster strips against the sides of the hall. As a result, the ceiling beams of the lateral aisles interlock in the architraves not in correspondence to the pillars, as structural logic would normally have demanded, but instead follow a geometric design that divides the lateral aisles into three sectors, and the central nave into two.

The metope frieze is still imitated in stone over the architraves. Veering on the short side towards the facade of the central nave, it also decorates the walls of the sanctuary, once again revealing its ornamental function (Figure II-55).

In the central nave, raised higher than those of the lateral aisles, a flat ceiling is interspersed by simple cross-beams taking their position from the pilaster strips against the lateral walls of the hall, and not from the pillars below (Figure II-56).

The semicircular apse is covered by a sort of dome, and inside, only traces remain of the openings of the spaces that flanked it, since they have been walled up.

A later underground basilica is Wēqro Māryām Nabalat,³⁸ excavated north of the plain of Hawzēn at the foot of the Amba Sanēyti. The southern facade, modelled in the rock without decoration (Figure II-57), has three doors. The western gives access to a sumptuous narthex that surrounds the front of the hall to allow entry from the north to the first bay, which is accessed directly also from the outside, confirming the typical disposition of side entrances to the body of the basilica. The third door leads directly to the presbytery (Figure II-58).

The narthex is divided into two spans of two intermediate pillars, with arches that connect them to the corresponding pilasters against the walls (Figure II-59).

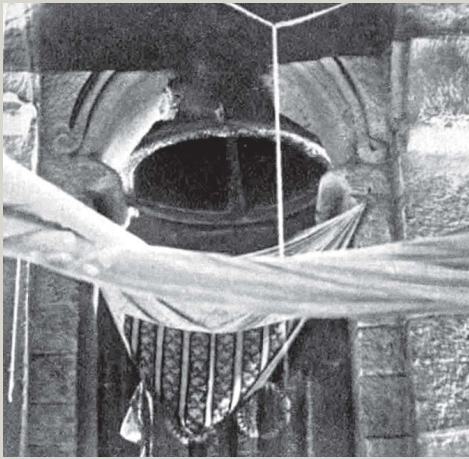


Figure II-62

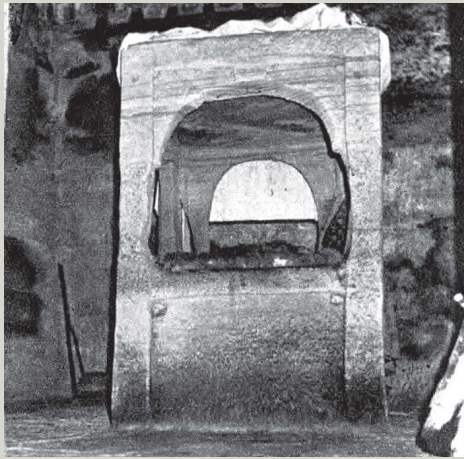


Figure II-63

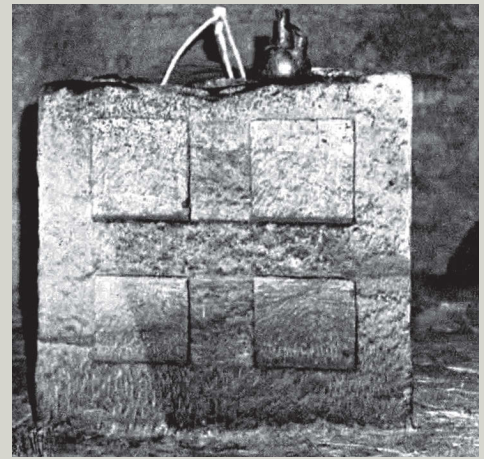


Figure II-64

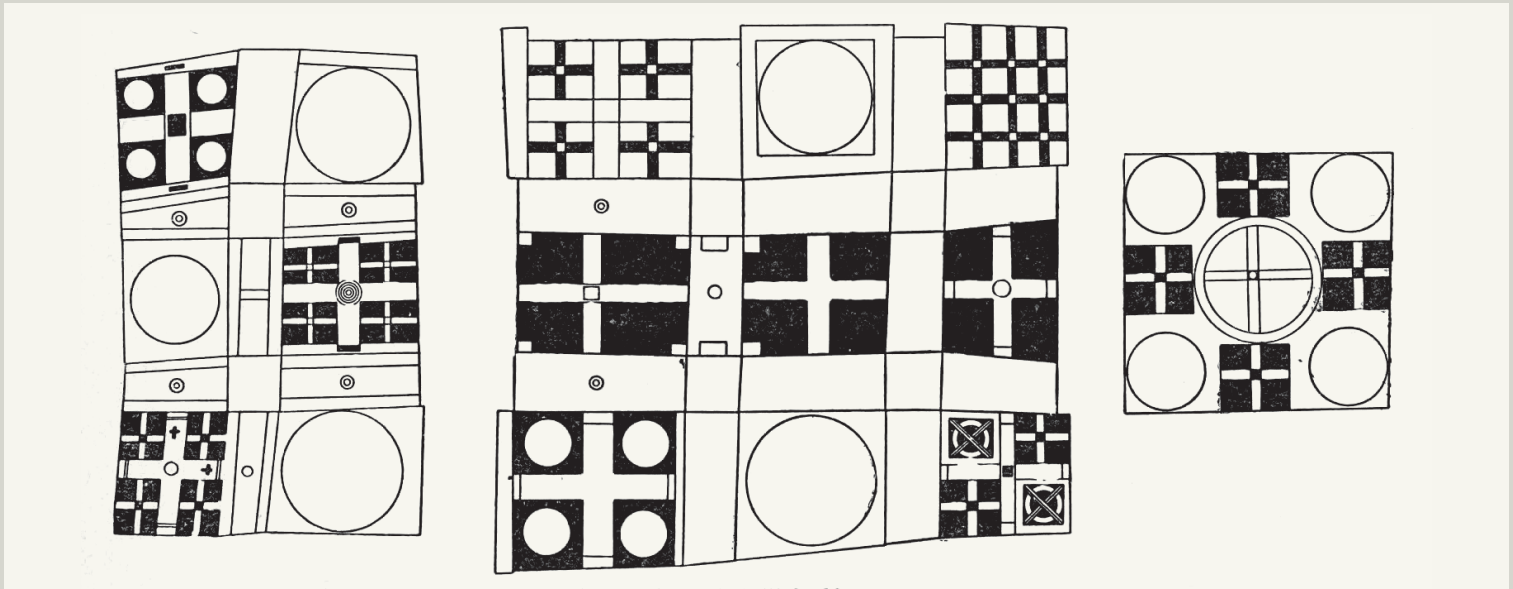


Figure II-65

Figure II-62. Detail of the interior of the nave and sanctuary of the basilica of Wēqro Māryām Nabalat (from Mordini 1939)

Figure II-63. Principal altar of the basilica of Wēqro Māryām Nabalat (from Mordini 1939)

Figure II-64. Altar in the northern side of the sanctuary of the basilica of Wēqro Māryām Nabalat (from Mordini 1939)

Figure II-65. Sculpted ceilings of the basilica of Wēqro Māryām Nabalat (Mordini 1939: 525)

The hall is divided into three aisles, the central nave being strongly elevated compared to the sides (Figure II-60), in this respect recalling the portion of the basilica of Dabra Salām Mika'el that is carved into the rock (Figure II-23).

Only in the the first two bays of the central nave is the structure set on lintels with the metope frieze above, still at a level corresponding to that of the aisles. The frieze does not continue into the third span, which is indeed distinct from the first two, having arches, and from which three steps lead up, through another arch, moulded with curls at the ends, to the sanctuary, which is also banded at the top by a metope frieze (Figures II-61, II-62).

Inside is an altar with a ciborium carved in bedrock, and in the adjacent compartment a cubical altar with an engraved cross is also carved into the rock, signifying that the use of such chambers as *pastophoria* could give way to the introduction of further altars in the church according to a development of liturgical practices in the new millennium (Figures II-63, II-64).

All the ceilings are carved with cruciform motifs alternating with larger and smaller domes, while umbonate protuberances decorate the keystones and under the lintels (Figures II-66, II-67).

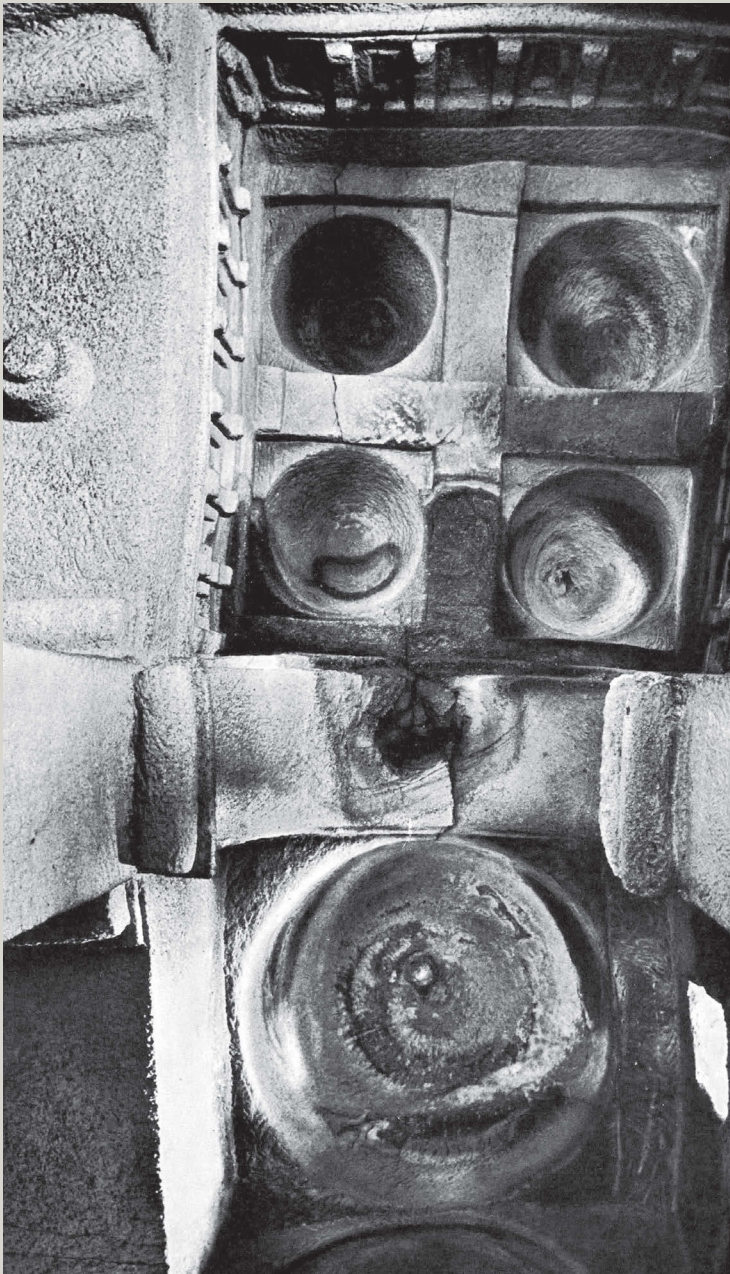


Figure II-66

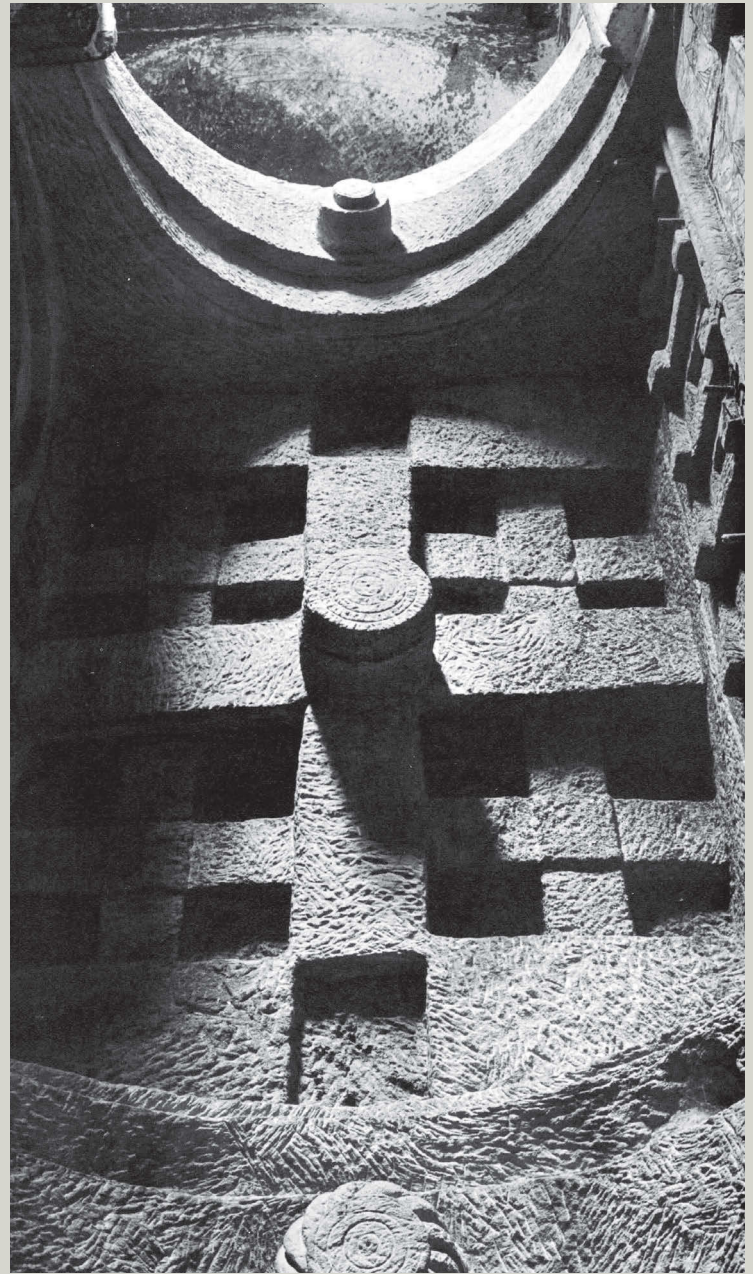


Figure II-67

Figure II-66. Domed ceilings on the first and second span of the southern nave of the basilica of Wēqro Māryām Nabalat (from Gerster 1970, pl. 173)

Figure II-67. Ceiling of the central span of the vestibule of the basilica of Wēqro Māryām Nabalat (from Gerster 1970: pl. 172)

The Semi-Monolithic Basilicas:

'Abrēhā-wa-'Aṣbēha, Wēkro Qirqos and Mikā'el 'Ēmbā

In eastern Tigray, along a trajectory that extends from the west, almost from the plain at the foot of the massif of Gar'altā, to the east, passing by Aṣbi, one encounters, in the following sequence, the basilicas of 'Abrēhā-wa-'Aṣbēha (Figure II-68), Wēkro Qirqos (Figure II-69) and Mikā'el 'Ēmbā (Figure II-70). They are defined as semi-monolithic, because they were dug into the rock to form a fully underground internal space, while the exterior of the facades and portions of the sides are only sketched out (Figures II-71, II-72).

Figure II-68. Plan of the semi-monolithic basilica of 'Abrēhā-wa-'Aṣbēha (from Lepage & Mercier 2005: 72-81)

Figure II-69. Plan of the semi-monolithic basilica of Wēkro Qirqos (from Plant: 92)

Figure II-68

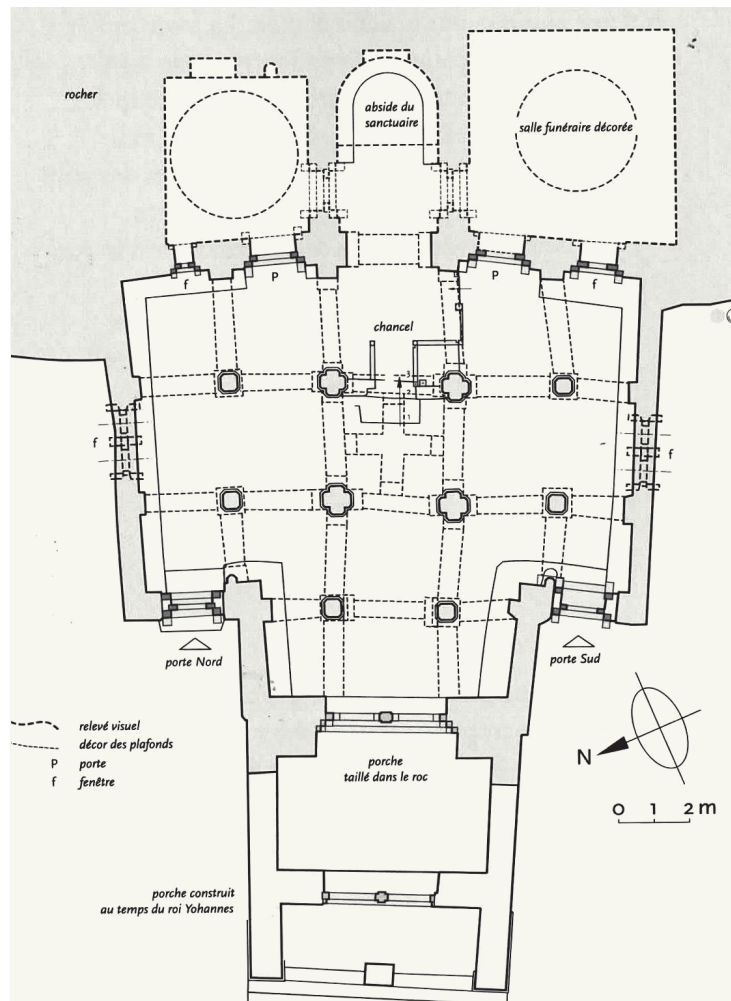


Figure II-69

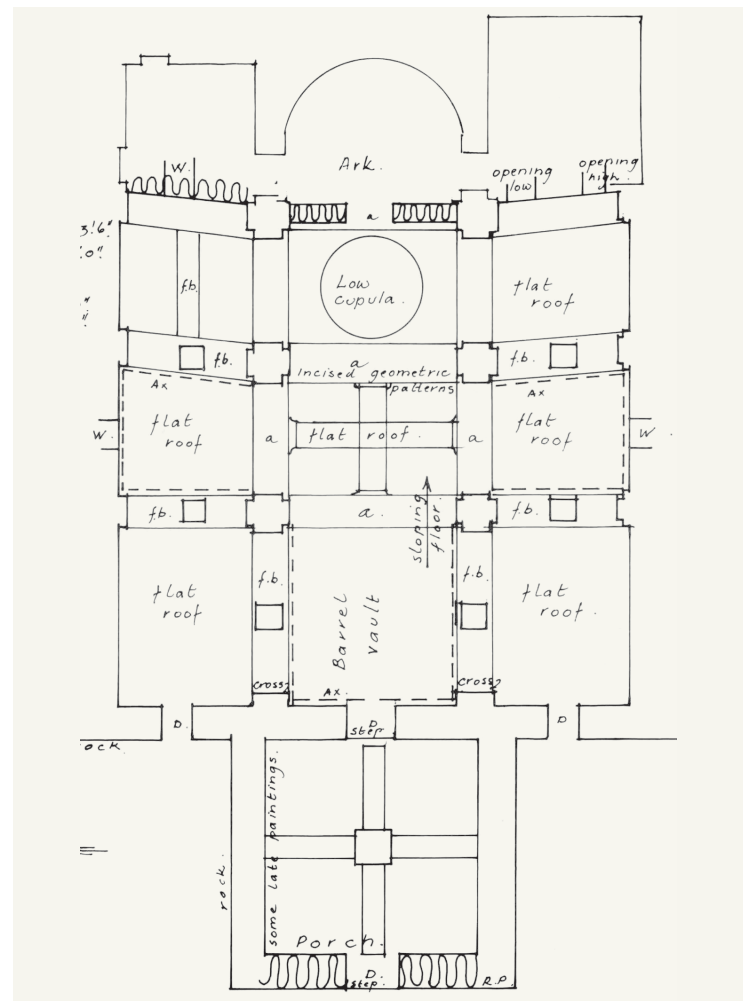


Figure II-70



Figure II-72

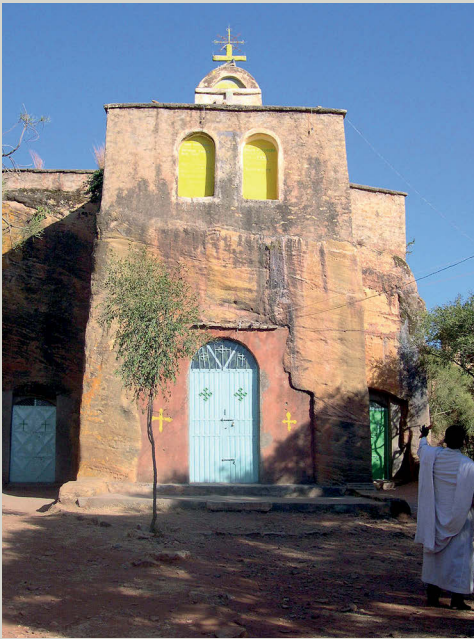
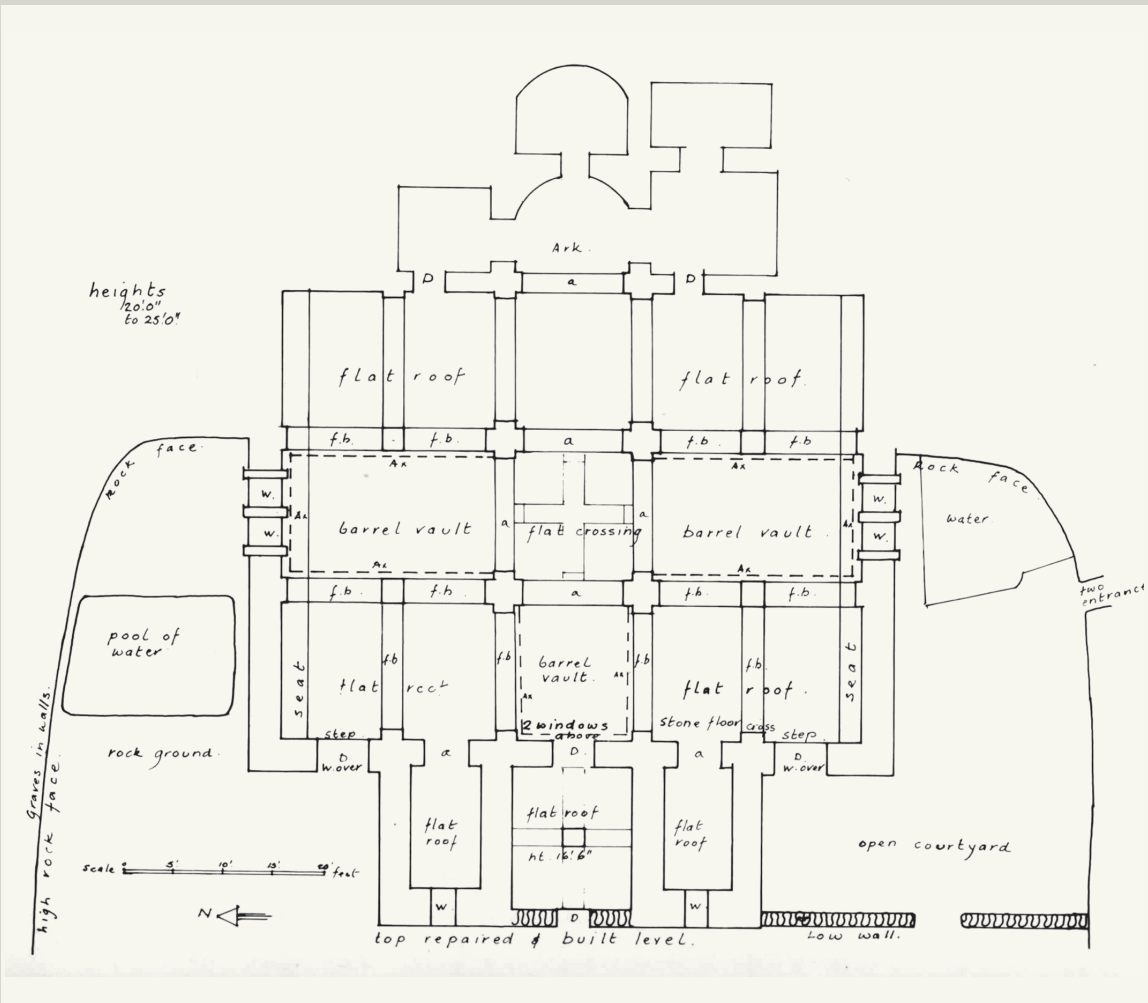


Figure II-71

Figure II-70. Plan of the semi-monolithic basilica of Mikā'el 'Ēmbā (from Plant: 98)

Figure II-71. Exterior of the semi-monolithic basilica of Wēkro Qirqos (photograph: Mario Di Salvo)

Figure II-72. Exterior of the semi-monolithic basilica of Mikā'el 'Ēmbā (photograph: Mario Di Salvo)



Figure II-73



Figure II-75

Figure II-73. View from the bottom of the central nave of the basilica of 'Abrehā-wa-'Aṣbēha (photograph: Mario Di Salvo)

Figure II-74. Vestibule of the semi-monolithic basilica of Mikā'el 'Ēmbā (photograph: Mario Di Salvo)

Figure II-75. Pillar of the vestibule of the semi-monolithic basilica of Wēkro Qirqos (photograph: Mario Di Salvo)

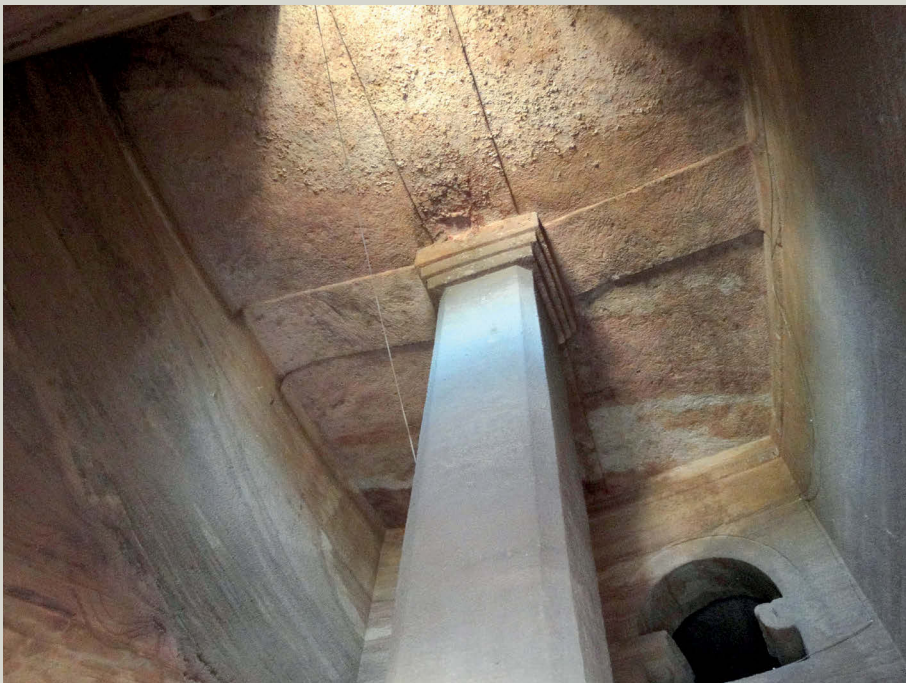


Figure II-74

Figure II-76. Detail of the interior of the semi-monolithic basilica of 'Abrēhā-wa-'Aṣbēha (photograph: Mario Di Salvo)



Figure II-76

It is true that the expansion of the width of the hall from three to five aisles, compared to a depth of just three spans, may have been dictated by the geology of the rock formation, which suggested that it would be best to limit the depth of the excavation as opposed to its width. The result is a crosswise spatial layout accentuated by the introduction of a transept in the central span, which – in this case – brings out a biaxial configuration (longitudinal + crosswise).

At the risk of putting forward a presumptive interpretation, it is entirely possible that there could well be a precise typological connection between the three semi-monolithic basilicas and the Aksumite basilica of Sana'a in Yemen, built in the first half of the sixth century and still standing until the second half of the eighth, prior to its demolition in 753–75. As described in the chronicles, the longitudinal space was combined with the intersecting space of the transept and the vertical space was enhanced by a dome. The same dome is found in the same position, beyond the transept, in the semi-monolithic basilica of 'Abrēhā-wa-'Aṣbēha (and in a more attenuated version, also in the semi-monolithic basilica of Wēkro Qirqos), reinforcing the vertical thrust of the space above the apse, and indicative of its sanctity (Figure II-73).

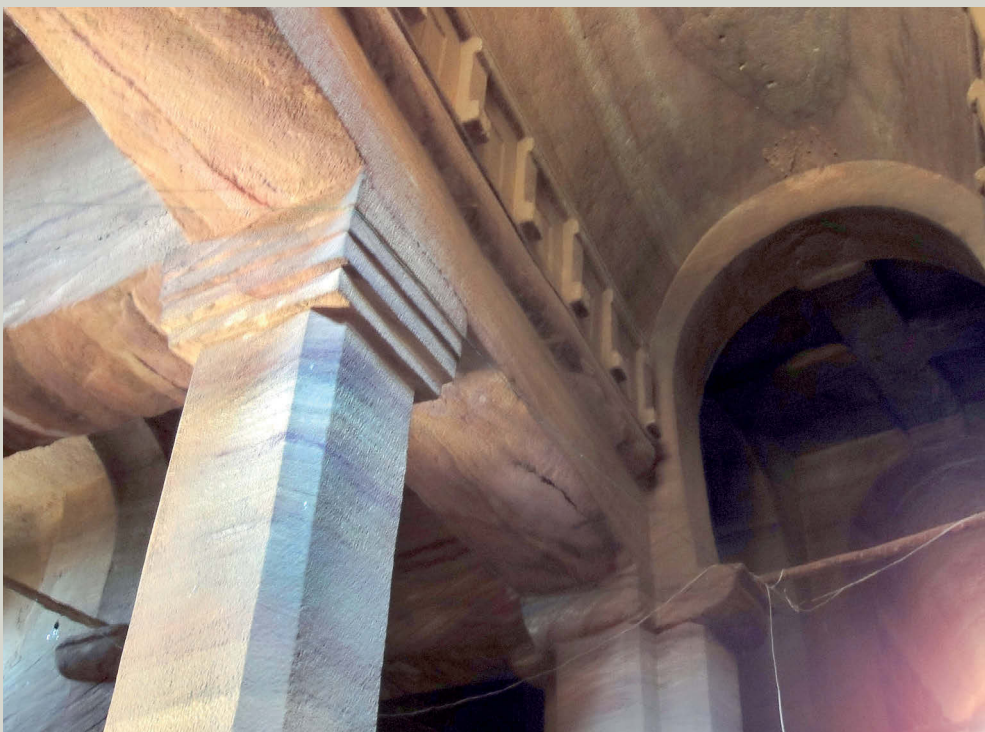


Figure II-77



Figure II-78

Figure II-77. Detail of the interior of the semi-monolithic basilica of Mikā'el 'Ēmbā (photograph: Mario Di Salvo)

Figure II-78. Pillar inside the semi-monolithic basilica of Wēkro Qirqos (photograph: Mario Di Salvo)



Figure II-79

Figure II-79. Detail of the interior of the semi-monolithic basilica of Wēkro Qirqos (photograph: Mario Di Salvo)

The outer walls around the monolithic portions of the three basilicas are of a constant thickness, traced on the outside in a rectilinear design without protrusions and recesses, and featuring pilaster strips on the inside, as in all the underground basilicas.

The wide frontal attachment to the rocky mass generates, in all the examples, the western placement of the accesses to the lateral aisles of the hall. The arrangement of the narthex, on the other hand, is different in each: in the basilica of 'Abrēhā-wa-'Aṣbēha it seems to be entirely absorbed inside the hall, almost being an endonarthex as wide as three of the five naves (to which a preliminary atrium was later added³⁹). In the basilica of Mikā'el 'Ēmbā, the narthex evolves into a simple entrance vestibule (Figure II-74) flanked by two rooms which open towards the nearer lateral aisles, in keeping with a scheme that was to be further developed later on. The basilica of Wēkro Qirqos, on the other hand, is entered axially from a square atrium slightly wider than the central nave (Figure II-75).

Inside 'Abrēhā-wa-'Aṣbēha and Mikā'el 'Ēmbā the halls have the same structural framework, whereas in Wēkro Qirqos, the width of the lateral aisles has been compressed to a considerable degree, with intermediate pillars that halve the spans.

The pillars placed between the naves generally have a square section, with the corners bevelled for the full height. The capitals placed on pillars and pilaster strips have different forms.

Stepped capitals with the typical Aksumite profile are found in the semi-monolithic basilica of 'Abrēhā-wa-'Aṣbēha (Figure II-76), similar to those supporting the triumphal arch of the ancient north hypogeum of Dēgum Šēllāsē (Figure II-40). The same stylistic arrangement is repeated, though in an approximate way, in the basilica of Mikā'el 'Ēmbā (Figure II-77).



Figure II-80

Figure II-80. Intersection of nave and transept in the semi-monolithic basilica of 'Abrehā-wa-'Aṣbēha (photograph: Mario Di Salvo)



Figure II-81

Figure II-81. Intersection of nave and transept in the semi-monolithic basilica of Mikā'el 'Ēmbā (photograph: Mario Di Salvo)

Figure II-82. View from the west of the central nave of the basilica of Wékro Qirqos (photograph: Mario Di Salvo)



Figure II-82



Figure II-83

Figure II-83. Transept of the semi-monolithic basilica of 'Abrëhà-wa-'Aṣbëha (photograph: Mario Di Salvo)

Figure II-84. Transept of the semi-monolithic basilica of Mikä'el 'Ēmbä (photograph: Mario Di Salvo)

Figure II-85. Transept of the semi-monolithic basilica of Wëkro Qirqos (photograph: Mario Di Salvo)



Figure II-84



Figure II-85

The capitals in the basilica of Wēkro Qirqos, on the other hand, can be seen as an evolutionary variant of the Aksumite cubical capital, featuring at the edges a concave shape (Figure II-78) that seems to forecast or match the model of the capitals found in the monolithic basilica of Bēta Māryām and the underground hypostyle of Dabra Sinā at Lālibalā originating in the thirteenth century.

The architraves bear the characteristic metope frieze that runs along the walls to figuratively mark the incorporation of the flat ceilings of the lateral aisles on the architraves (Figures II-76–II-78). Four cruciform pillars with quarter-circle corbel capitals (Figure II-79) are placed at the intersection between the central nave and the transept, and four monumental arches are set on these, between which is a ceiling with an engraved cross with the ends of its arms resting on corbels placed at the summits of the arches themselves (Figures II-80–II-82).

The transept in particular characterizes the space of the three basilicas, with vaulted ceilings (Figures II-83–II-85) raised directly on the metope frieze, without the interposition of a clerestory as is typical in all underground basilicas, where the light penetrates the innermost part of the hall only from perimeter openings.

The roofing of the presbyteries and the apses uses the entire repertory of ceiling types: flat (coffered, with rotated overlaid sectors), vaulted, domed, and apse basin (Figures II-86, II-87).

So already the observations made on the plans (planimetric arrangement) and the precise stylistic references of the three basilicas could give useful insights about the temporal sequence of each of them. Even though they follow the same typology, identifiable as matrix in that of 'Abrēhā-wa-'Aṣbēha and closely repeated in Mikā'el 'Ēmbā, the basilica of Wēkro Qirqos is based on a more approximate interpretation, with the presence of later stylistic features.

It should, however, be noted that only in the basilica of Mikā'el 'Ēmbā do we find three sanctuaries introduced by a triple balustrade (partly rebuilt), announcing the important architectural transformation that resulted from profound changes in the rites of the Eucharistic liturgy that scholars have dated to the twelfth century.

The presbyteries are in each case distinguished in a similar way, by the raising of the third span above the level of the transept, and they are still separated, in the basilicas of 'Abrēhā-wa-'Aṣbēha and Mikā'el 'Ēmbā, by balustrades with panels decorated with intertwined cruciform motifs (Figure II-88). The spaces flanking the apse are connect to their adjacent lateral aisles, as well as to the apse itself. With the passage of time, various adaptations may have altered the original arrangement and the original funerary function of the basilicas, depending on liturgical or practical requirements brought about by the introduction and development of new ritual practices.



Figure II-86

Figure II-87

Figure II-88



Figure II-86. In the background, the roof of the apse sector of the semi-monolithic basilica of 'Abrehā-wa-'Aṣbēha (photograph: Mario Di Salvo)

Figure II-87. Flat dome on the third span of the central nave of the basilica of Wēkro Qirqos (photograph: Mario Di Salvo)

Figure II-88. Transenna in the basilica of Mikā'el ʾĒmbā (photograph: Mario Di Salvo)

- ¹ In the basilica of Arbā'etu Ensesā at Aksum (Figure I-8).
- ² Buxton 1970: 101, Figure 19; Phillipson 2009: 17, Figure 20.
- ³ As already seen in the Aksumite basilicas of Endā Kālēb (Figure I-4) and the burial basilica of Maṭarā (Figure I-8).
- ⁴ Matthews & Mordini: 31, fig. 10.
- ⁵ Zārēmā Giyorgis (see below), and others in successive epochs: Yēmrēhanna Krēstos (Figure III-20), Wālyē Iyasus (Figure III-16, III-21), Bēta Lēhem Māryām (Figure III-54, III-57).
- ⁶ Bidder: 105, fig. 67; Lepage 1973: 75. The vaulted scheme with ribs is the model of reference of the monolithic basilicas of Bēta 'Amānu'ēl, Bēta Libānos and Bēta Māryām at Lālibalā.
- ⁷ Type of dome recurring at Yēmrēhanna Krēstos (Figure III-24), 'Ēmakinā Madōānē 'Ālam (Figure III-25), all the way to Bēta Lēhem Māryām (Figure III-59), and imitated in underground and semi-monolithic basilicas.
- ⁸ In the mid sixth century in both basilicas of the Endā Kālēb complex at Aksum (Figure I-6), in the burial basilica of Maṭarā (Figure I-8) and at Melazo Endā Qirqos (Figure I-9).
- ⁹ Gerster 1974: 249; Lepage, 1975: 41-44; Phillipson 2009, 102-03, attributes it to the second half of the first millennium.
- ¹⁰ Buxton 1970: 102, fig. 125, 133; Gerster 1970: 121-24, fig. 148-59; Lepage 1975: 56-59; Plant: 109-10; Lepage & Mercier 2005: 94-101; Balicka Witakowska 2005b: 37-39; Pascher: 82-86; Phillipson 2009: 68-71. The paintings present in the basilica have been attributed by Balicka Witakowska and Lepage & Mercier to the second half of the twelfth century.
- ¹¹ Lepage 1973: 57-58; Lepage 1975: 36-40; Anfray 1990: 174-76; Lepage & Mercier 2005: 62-71; Pascher: 75-76; Phillipson 2009, 73-74. Anfray attributes the basilica to the ninth century, Phillipson to the second half of the first millennium.
- ¹² The fact that a wooden framework made with overlaid squares progressively rotated one over the next by 45° was the typical structure used for flat segmented ceilings is confirmed by the roof of the two lateral vestibules of Zārēmā Giyorgis and of the apse of 'Āgawo Qirqos.
- ¹³ Fritsch & Gervers: fig. 12.
- ¹⁴ Compare the basilica of Endā Māryām at Asmara, where a room to the north of the tripartite narthex perhaps once contained a staircase leading to the galleries, while a central vestibule offered axial entry to the central nave, and another reached the southern aisle.
- ¹⁵ Lepage & Mercier 2005: 62.
- ¹⁶ Yēmrēhanna Krēstos (Figure III-20), Wālyē Iyasus (Figure III-21), all the way to Bēta Lēhem Māryām (Figure III-54).
- ¹⁷ Bent: 20, 38, 42; Vigoni: 72; *I popoli del mondo*: 267; Pianavia Vivaldi: 132-34; Sauter 1969: 220-31; Buxton 1970: 102; Leroy: 98, 118, fig. 53-55; Fiacadori: 289-90; Phillipson 2009: 64-66.
- ¹⁸ Mordini 1960; Anfray 1966, 13-14, pl. VI, 12-13; Buxton 1970: 102, pl. 97-98; Leroy: 98; Phillipson 2009: 66.
- ¹⁹ It could be risky to make hypotheses regarding the basilicas of Asmara Endā Māryām and 'Arāmo based on the available surveys, especially since these also record – where Asmara Endā Māryām is concerned – later alterations to the original composition.
- ²⁰ Sauter 1969: 220-31.
- ²¹ Mordini even attributes the basilica of 'Arāmo to the thirteenth-fourteenth century (Mordini 1960: 44).
- ²² In keeping with a model that is evident in the monolithic basilicas of Lālibalā and the basilicas created in the caverns of 'Ēmakinā Madōānē 'Ālam (Figure III-10) and 'Ēmakinā Lēdata Māryām (Figure III-11).
- ²³ Anfray & Annequin, pl. XXVIII, fig. 3-5.
- ²⁴ In the basilica of Arbā'etu Ensesā at Aksum (Figure I-10).
- ²⁵ Lepage 1973: 49-50, 51-53; Lepage 1975: 48-52; Plant: 50-51; Anfray 1990: 179-82; Balicka Witakowska 2005: 126-27; Lepage & Mercier 2005: 46-55; Phillipson 2009: 89-91.
- ²⁶ de Roux.
- ²⁷ The hypogeum is attributed by scholars to a time ranging from the Aksumite period (Lepage 1975: 48-52), to the seventh-eighth century (Balicka Witakowska 2005; Plant), to the 'third quarter of the first millennium' (Phillipson, 2009), all the way to the eleventh-twelfth century (Lepage 1973; Buxton 1970).
- ²⁸ Plant: 100-01.
- ²⁹ Endā Kālēb near Aksum (Figure I-12) and Adulis (Figure I-15).
- ³⁰ Plant: 139-40; Lepage & Mercier 2005: 90-93; Phillipson 2009: 98-99.
- ³¹ In the Aksumite basilicas of Maṭarā (Figure I-14), Adulis (Figure I-15), Arbā'etu Ensesā at Aksum (Figure I-17) and Agulā Endā Qirqos (Figure I-9).
- ³² In the complex of Endā Kālēb at Aksum (Figure I-12) and Adulis (Figure I-7b).
- ³³ Capuani: 43. This feature also is replicated in the basilica of Yēmrēhanna Krēstos.
- ³⁴ Plant: 175-76. The rough plan of the basilica is shown without indication of the perimeter pilaster strips and the apse sector. Lusini 2005 dates it from the tenth to the thirteenth century; Lepage & Mercier, 2005: 58-61; Phillipson, 2009: 92.
- ³⁵ Buxton 1970: 101, pl. 44, fig. 19; Phillipson 1997: fig. 51; Phillipson 2009: 17, fig. 20.
- ³⁶ A type of dome that recurs later at Yēmrēhanna Krēstos (Figure III-24), 'Ēmakinā Madōānē 'Ālam (Figure III-25), extends all the way to Bēta Lēhem Māryām (Figure III-59), and is imitated in underground and semi-monolithic basilicas.
- ³⁷ Lepage 1972: 147-92; Plant: 68-69; Anfray 1990: 182-84; Lepage & Mercier, 2005: 56-57; Fritsch & Gervers: 13; Phillipson, 2009: 91-92.
- ³⁸ Mordini 1939: 517-26; Gerster 1970: 127-28, ill. 171-73; Plant: 76-79; Lepage & Mercier 2005: 160-63; Phillipson 2009: 101-04; Balicka Witakowska 2010b.
- ³⁹ Modified by the Emperor Yohannes at the end of the nineteenth century (Lepage & Mercier 2005: 81).

PART III

The Architecture of the Medieval Basilicas of Ethiopia

*(The Twelfth-Century Zagwe
Kingdom and the Restoration of
the Solomonic Dynasty)*

Map III

Location of the medieval basilicas of Ethiopia (the twelfth-century Zagwe Kingdom and the restoration of the Solomonic Dynasty). Brown lines indicate the main watershed ridges; red lines indicate minor watershed ridges.





An in-depth analysis of the post-Aksumite basilicas has shed light on progressive innovations, although these did not necessarily develop in a linear fashion. New developments were, at times, associated with much earlier forms, as traditional patterns were followed for what came to be more or less purely aesthetic reasons. Nevertheless within the general basilica model, a typological and stylistic analysis of the variations implemented in each case – bearing in mind the accumulation of architectural characteristics that can be attributed to different phases of development – can provide useful clues towards our ability to identify certain patterns. In addition, such an analysis enables us to discern between factors of conformity or evolution, though without making any attempt at dating except in very rare cases where reliable documentary sources are available.

With the advent of the Zagwe dynasty in the twelfth century, Ethiopian civilization gradually became concentrated in the Lasta region. To all intents and purposes, it served as a ‘refuge zone’ situated to the south of Tigray. A vast promontory situated between the cliffs formed by two waterways of the basin of the Takkazē, the region is connected to the north–south crest that borders the Ethiopian plateau to the east: a natural phenomenon which performs an essential strategic function due to the wide-ranging connections it provides within an otherwise impassible terrain.

Basilicas Constructed in Caves

A comparative examination of a series of basilicas in the Lasta region shows influences and interrelations with the basilicas of Tigray, but their specificity in some cases lies in the fact that they were built inside large caves, as a highly symbolic expression of a particular relationship with Mother Earth. One notable example is the basilica of Yëmrëhanna Krëstos,¹ built inside the massif of 'Abuna Yosëf which is situated roughly 12 km from Lālibalā, the capital of the region. By comparison, other basilicas in the region tend to be more modest structures. The basilica of Wālē Iyasus (Figure III-6),² in the Qoqhanā region, and others in the 'Abuna Yosëf massif, namely 'Ĕmakinā Madōānē Ālam (Figures III-7, III-8)³ and 'Ĕmakinā Lēdata Māryām (Figure III-9)⁴ provide relevant examples. The basilica of Yëmrëhanna Krëstos (Figures III-1, III-2) is a key element in demonstrating the permanence of the Aksumite architectural tradition. It lies inside a deep cavern, described by Alvarez in the first half of the 1500s,

in which, in my judgement, three large ships with their masts could be contained [...] The church found inside this cave is as large as a cathedral, and has beautiful, well-adorned and finely crafted naves, all vaulted. In addition it features three very beautiful and ornate chapels. The entrance to this cavern is from the east, and the chapels face the entrance.⁵

In this basilica we can see clearly intended references to a specific 'style' based on ancient models that expressed the identity of a people and the glory of an empire. In essence it is a style embodying the will to preserve a long-vanished culture and civilization and to ennoble the present with appropriate signs of continuity.⁶

As outlined in the plan (Figure III-2), with its sides in a nearly perfect ratio of 3:4 between width and length (9.3 x 12.5 metres, in keeping with the already mentioned 'Pythagorean triangle'), the aesthetic pursuit of rigorous symmetry in the structure as a whole is clearly legible – as is typical of ancient Aksumite architecture – in the arrangement of the protruding and recessed parts of the masonry and the corner towers. These appear to have no apparent functional role, but probably represent a way of laying claim to a place in the ancient tradition of Aksumite palatial structures (Figure III-3).



Figure III-1

In the elevation, the stacked masonry bands of the basilica of Yēmrēhanna Krēstos clearly make figurative reference to those represented in the great Obelisk of Aksum, with courses of stucco-clad stones protruding slightly on wooden planks, here innovatively interlocked with ‘monkey heads’ and always joined in the same fashion at the corners in artfully cut wooden blocks to simulate the interlocking of two beams at 90° (Figures III-4, III-5).⁷

In terms of design, the basilica of Wālē Iyasus (of which there is no published planimetric survey) appears closest to that of Yēmrēhanna Krēstos, but with much less replication of the traditional structuring of the outer wall masonry, due to the smaller width of the protrusions, which are reminiscent of pilaster strips (Figure III-6). In the case of the basilicas of ʾĒmakinā Madōānē ʾĀlam (Figures III-7, III-8) and ʾĒmakinā Lēdata Māryām (Figure III-9), the thick exterior layer of stucco makes it impossible to discern the underlying masonry. It is clear, however, that

Figure III-1. The cave basilica of Yēmrēhanna Krēstos (photograph: Mario Di Salvo)

Figure III-2. Plan of the basilica of Yēmrēhanna Krēstos (from Bianchi Barriviera 1988: 73, pl. 55)

Figure III-3. Northern facade of the basilica of Yēmrēhanna Krēstos (photograph: Michael Gervers)

Figure III-4. Exterior facing of the basilica of Yēmrēhanna Krēstos (photograph: Mario Di Salvo)

Figure III-5. Corner block lying in the exterior enclosure of Yēmrēhanna Krēstos (photograph: Mario Di Salvo)

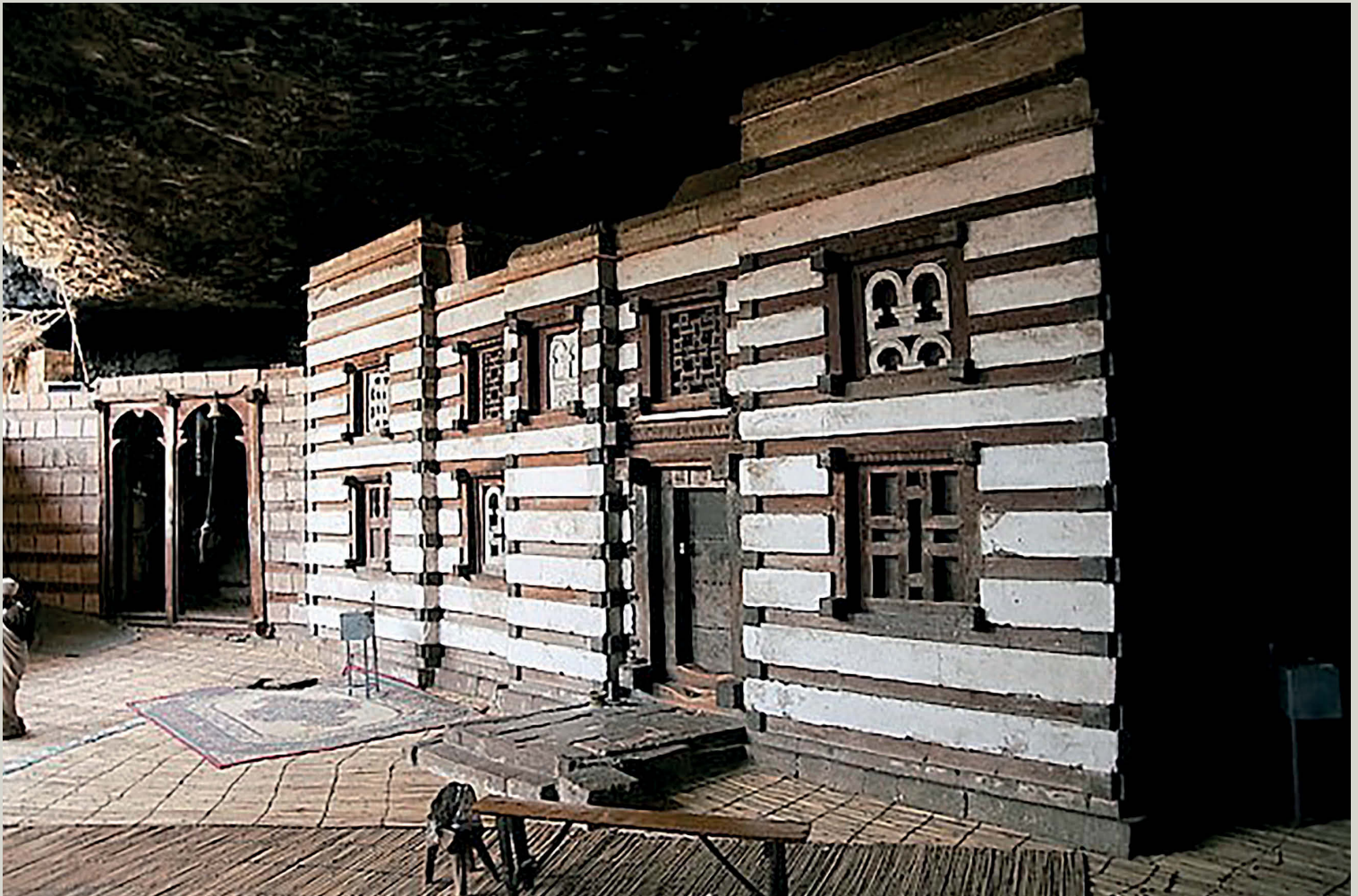


Figure III-3

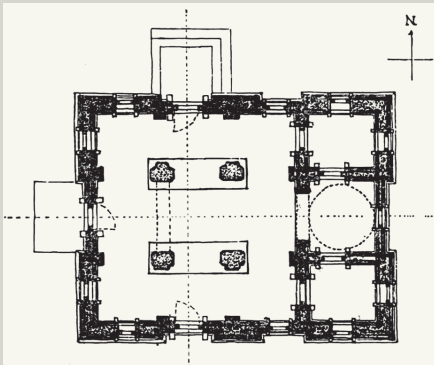


Figure III-2



Figure III-4



Figure III-5



Figure III-6

Figure III-6 Southwest corner of the basilica of Wälē Iyasus (photograph: Emmanuel Fritsch)

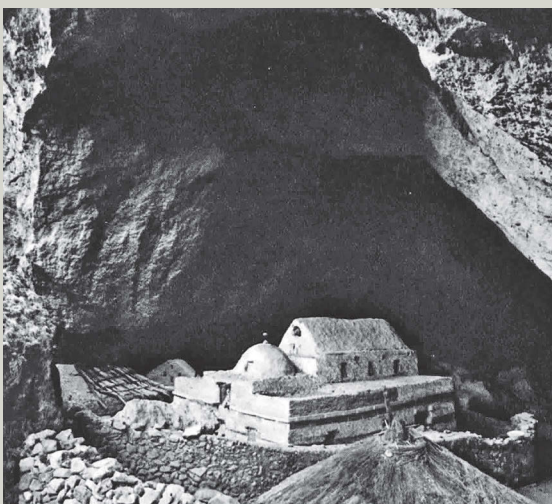


Figure III-7

Figure III-7. The cave basilica of 'Ēmakinā Madōānē 'Ālam (from Buxton 1970: 59)



Figure III-8

Figure III-8. Basilica of 'Ēmakinā Madōānē 'Ālam (photograph: Michael Gervers)

Figure III-9. Basilica of 'Ēmakinā Lēdata Māryām (photograph: Michael Gervers)

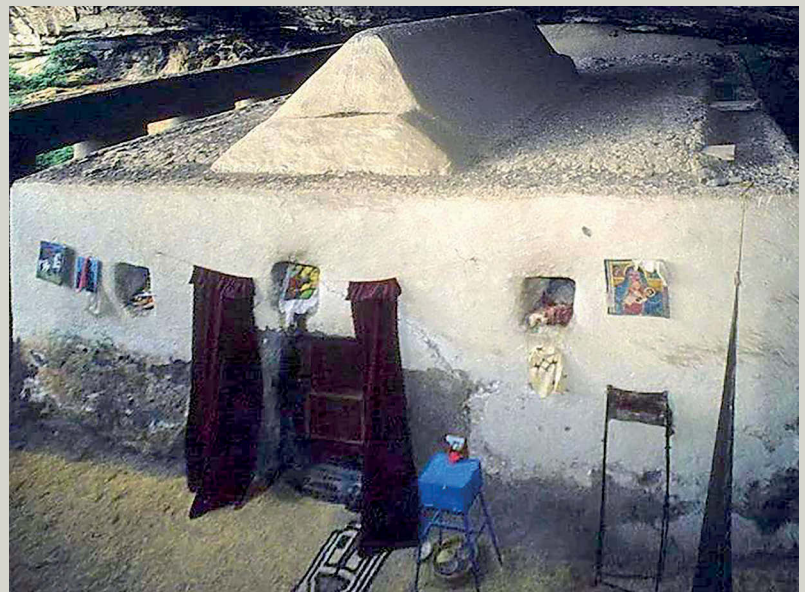


Figure III-9

both mark a definitive movement to a rectilinear design of the outer walls (Figure III-11). This in turn implies, on the eastern facade, a notable innovation in the lack of a setback of the external wall of the sanctuary, which is aligned with that of the connected chambers.

Additionally, in the basilica of Wālē Iyasus the masonry abandons the mixed stone/wood system in favour of hewn stone blocks, though still featuring alternating protrusions and recessions. The same is true of the basilica of 'Ĕmakinā Madōānē Ālam (Figures III-7, III-8) where the masonry is formed by overlaid bands of hewn stone blocks, slightly recessed, with level bands of irregularly shaped stone. Thus, within the relatively short time frame of approximately one century (the twelfth to thirteenth), the abandonment of the typical masonry arrangement of the Aksumite tradition is now in evidence.

The first interior space of the basilica of Yēmrehanna Krēstos assumes the form of an endonarthex in keeping with a type frequently found in Coptic basilicas beginning in the eighth century⁸ and already encountered in the ancient underground basilica of Gāzēn Yohannēs Matmēq (Figure II-48). The lateral aisles, in fact, feature the same flat pattern on the ceiling as well as on the first span of the

Figure III-10. Plan of 'Ĕmakinā Madhānē 'Ālam (from Gervers 2006)

Figure III-11. Plan of 'Ĕmakinā Lēdata Māryām (from Gervers 2006)

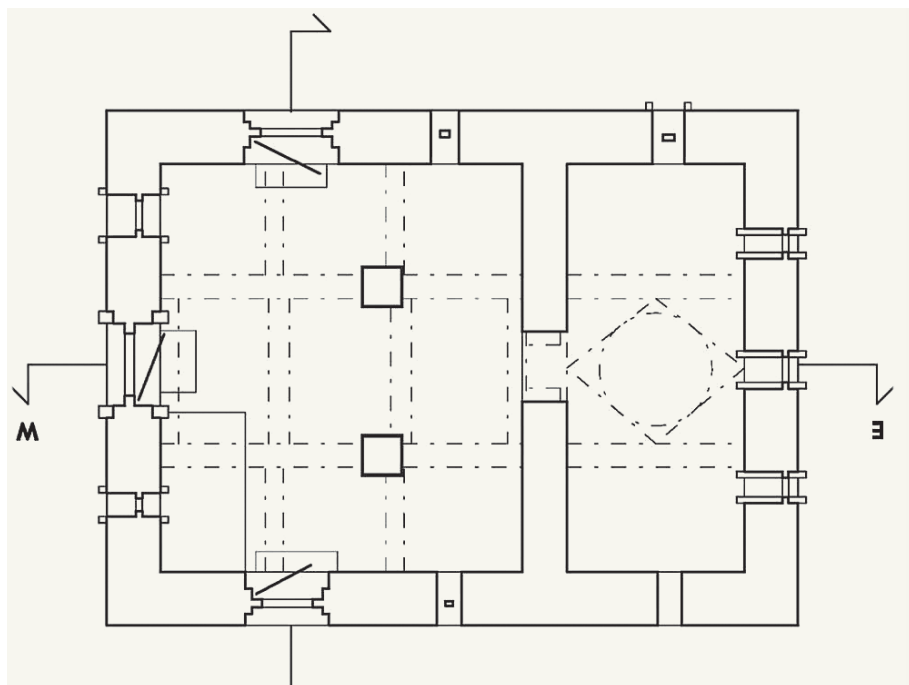


Figure III-10

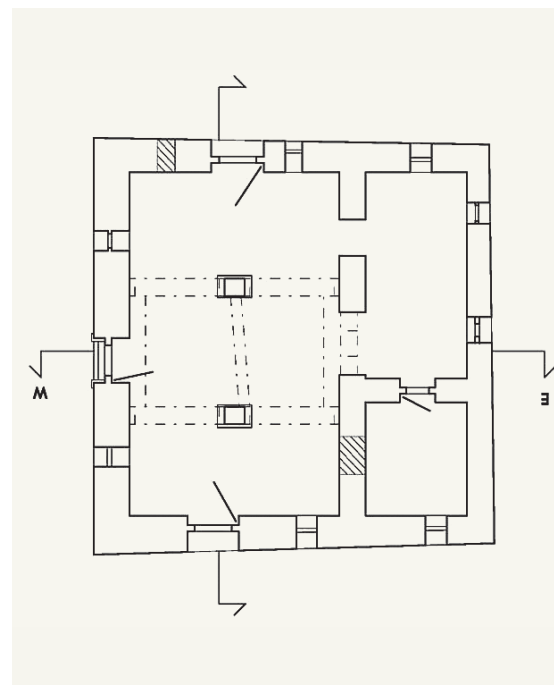


Figure III-11

Figure III-12. Interior of the basilica of
Yēmrēhanna Krēstos (photograph: Michael Gervers)



Figure III-12



Figure III-13



Figure III-14

Figure III-13. Longitudinal section of the basilica of Yēmrēhanna Krēstos (from Bianchi Barriviera 1988: 73, pl. 55)

Figure III-14. Central nave of the basilica of Yēmrēhanna Krēstos (photograph: Michael Gervers)

Figure III-15. Plan of the basilica of Wālē Iyasus
(Mario Di Salvo)

Figure III-16. Interior of the basilica of Wālē Iyasus (photograph: Michael Gervers)

Figure III-17. Interior of the basilica of 'Ēmakinā Madhānē 'Ālam (photograph: Michael Gervers)

Figure III-18. Interior of the basilica of 'Ēmakinā Lēdata Māryām (photograph: Michael Gervers)

central nave, forming a continuous U-shaped space. Therefore the lateral means of access leading directly to the main hall of the basilica of Yēmrēhanna Krēstos corresponds not to the first, but to the second span.

In the basilicas of 'Ēmakinā Madhānē 'Ālam and 'Ēmakinā Lēdata Māryām (Figures III-10, III-11) there is no endonarthex and one enters the hall directly from the front, and laterally at the position of the first span. The function of the narthex in front of the hall could, furthermore, have been fulfilled by the covered area located at the entrance of the cave.

Figure III-15

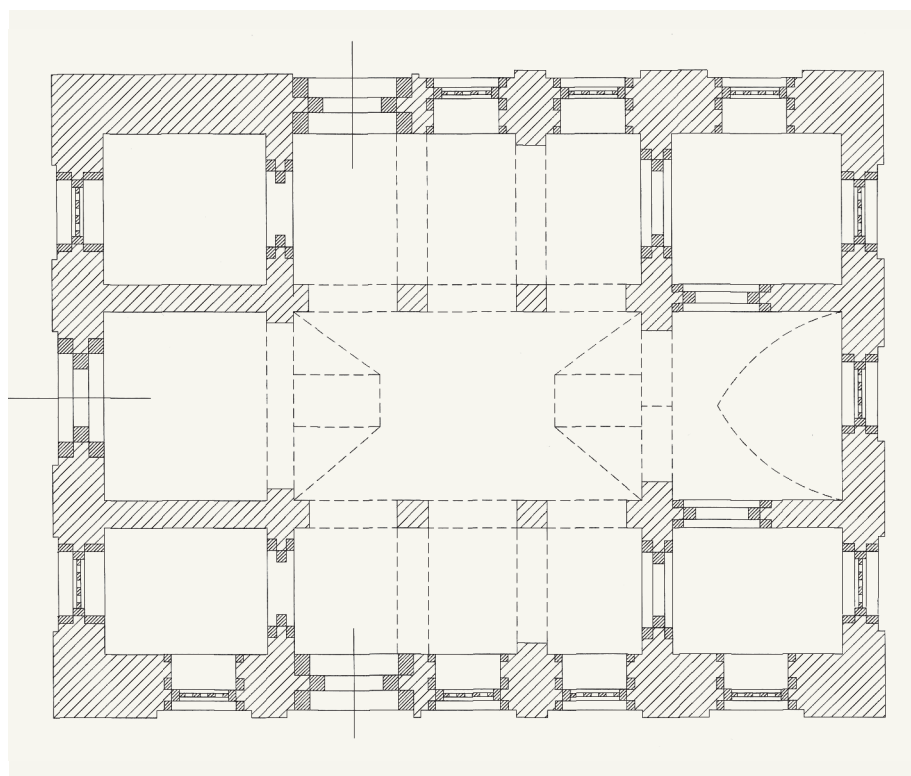


Figure III-16

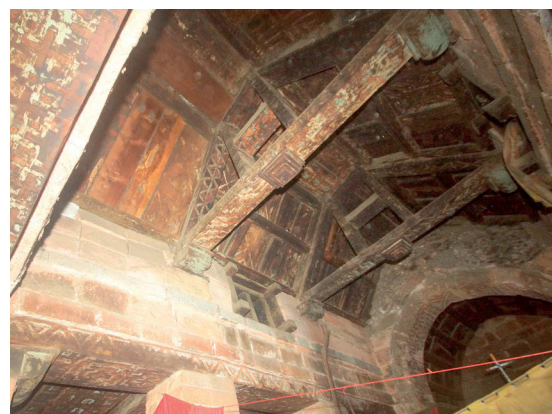


Figure III-17



Figure III-18





Figure III-19

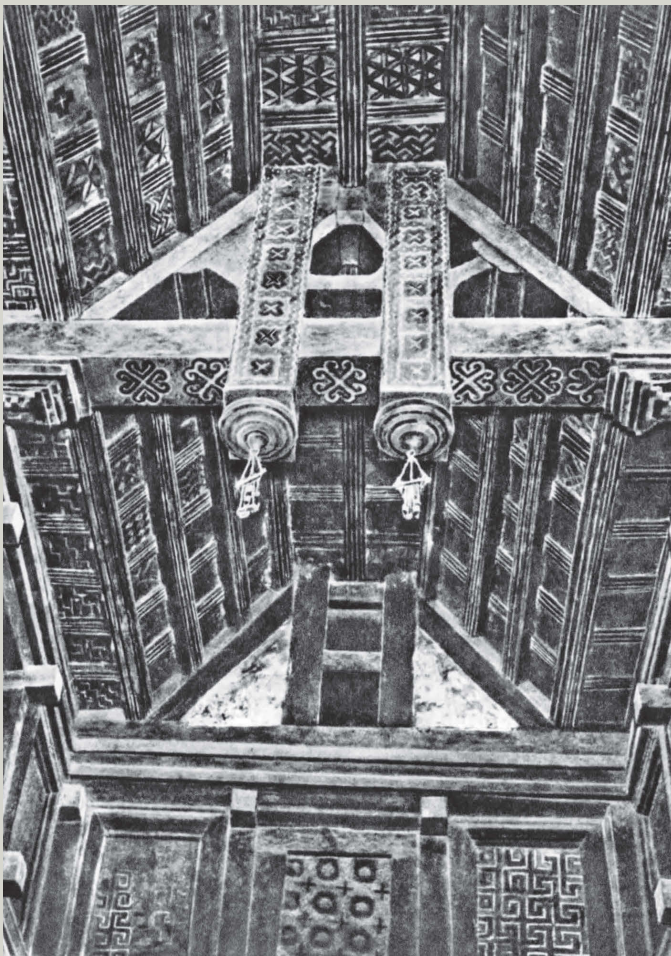


Figure III-20

Figure III-19. Cross section of the basilica of Yēmrēhanna Krēstos (from Bianchi Barriviera 1988: 73, pl. 55)

Figure III-20. Trusses over the central nave of the basilica of Yēmrēhanna Krēstos (from Buxton 1970: 55)

Figure III-22. Trusses of the basilica of 'Ēmakinā Madhānē 'Ālam (photograph: Michael Gervers)

Figure III-23. Trusses of the basilica of 'Ēmakinā Lēdata Māryām (photograph: Michael Gervers)

Figure III-21. The roof of the basilica of Wālē Iyasus (photograph: Michael Gervers)



Figure III-21



Figure III-23

Figure III-22





Figure III-24



Figure III-25

Figure III-24. Dome over the sanctuary of the basilica of Yēmrēhanna Krēstos (photograph: Michael Gervers)

Figure III-25. Dome over the sanctuary of the basilica of 'Ēmakinā Madhānē 'Ālam (photograph: Michael Gervers)

Further analysis of the cave basilicas also reveals a progressive alteration in terms of liturgical use. In the basilica of Yēmrēhanna Krēstos, the raised platform (*solea*) at the back of the hall for the celebrants, and any traces of *transennae*, are both missing. A single raised area, used for sacred readings, connects the pillars of the northern side of the second span.⁹ The *pastophoria* open both towards the sanctuary and towards the lateral aisles (Figure III-2).¹⁰ In the plan published by Monti della Corte, the presence of supplementary altars is indicated, probably confirming the fact that the original function could have been gradually replaced by the introduction of portable altars for the celebration of the Mass.

Also, in the basilicas of 'Ēmakinā Madḏānē 'Ālam and 'Ēmakinā Lēdata Māryām, no platform set aside for the celebrants is in evidence in front of the triumphal arch, nor are there any traces of *transennae*. The traditional layout of the presbytery area itself, that is a sanctuary flanked by two chambers, appears to have been altered. In the basilica of 'Ēmakinā Madhānē 'Ālam one enters only through the triumphal arch into a sanctuary consisting of a single room whose width – corresponding to that of the basilica as a whole – suggests new liturgical developments. At the back of the hall of the basilica of 'Ēmakinā Lēdata Māryām, on the other hand, there are two possible means of access to the sanctuary, one at the centre and one from the north aisle, while to the south a door (now walled up) once led to a connected space which also opened into the sanctuary.¹¹

The structural arrangement of the hall inside these basilicas is comparable, but it is interesting to observe the changes that have occurred in the central nave, which are in keeping with the progressive elimination of the characteristic metope frieze that had previously served as a constant reference to the Aksumite tradition.

The basilica of Yēmrēhanna Krēstos is divided into three naves, for three spans, by intermediate pillars with a T-shaped section, built with protruding blocks of pale stone alternating with recessed dark stones. The upper block of the pillars features a detailed capital with just one moulded contour facing towards the central nave, while on the other sides it forms a corbel – i.e. a supporting stone bracket. (Figure III-12).

The clerestory along the second and third spans of the central nave is directly raised above the arches, without the insertion of the metope frieze, by a series of wooden frames, with either windows or panels set between two mouldings (Figures III-13, III-14).

In the cave basilica of Wālē Iyasus, which also features three naves and as many spans (Figure III-15),¹² the metope frieze no longer runs along the architraves, but can be found directly on the clerestory with windows framed in wood to bring light to the central nave (Figure III-16), while in the basilica of 'Ĕmakinā Madhānē Ālam the wooden metope frieze remains on the architraves on which the clerestory is placed (Figure III-17). Finally, in the basilica of 'Ĕmakinā Lēdata Māryām light penetrates only from the perimeter openings of the hall, since the roof of the central nave is directly placed on the architraves without the insertion of either metope frieze or clerestory (Figure III-18).

The type of roof of the central nave is also a feature shared by the basilica of Yēmrēhanna Krēstos (Figures III-19, III-20) and that of Wālē Iyasus (Figure III-21): with trapezoidal trusses supported by paired posts, a prototype that evidently survived in Ethiopia for centuries; we have already observed it over the central nave of the basilica of Zarema Giyorgis.

The basilicas of 'Ĕmakinā Madhānē Ālam and 'Ĕmakinā Lēdata Māryām (divided into three naves with two spans, where the intermediate pillars support simple architraves) instead feature simple trusses with single king posts (Figures III-22, III-23), thus differing from the traditional Ethiopian model.

In the formation of the arches and vaulted roofs, it is striking to observe the masterful quality of the craftsmen who specialized in woodworking. A recurring feature of the sanctuaries is the formation of domes that fully correspond, in structural terms, to the one in the basilica of Endā Abuna Aragāwi at Dabra Dāmo (Figure II-9).



Figure III-26

Figure III-26. Roof of the central nave of the basilica of Yēmrēhanna Krēstos (photograph: Michael Gervers)

A spoked dome constructed with arched wooden ribs, where the gaps are bridged by painted coffers, is positioned over the sanctuary of the basilica of Yëmrëhanna Krëstos (Figure III-24), and a similar configuration can be seen above the sanctuary of the basilica of 'Ĕmakinā Madhānē 'Ālam (Figure III-25). Over that of Wālyē Iyasus, on the other hand, there is an ancient wooden barrel vault whose coffers form an almost pointed or ogival arch.

In the decorative compositions, a series of themes and models indicating a rich ornamental repertoire are repeated, finely carved in wood or replicated with stucco and then painted in detail, with the addition of wall paintings whose dating can provide a useful *terminus ante quem* for a chronological outline of the various basilicas (Figure III-26). For example, the paintings found in the basilica of 'Ĕmakinā Madhānē 'Ālam can be stylistically connected to those in the nearby monolithic hypostyle church of Gannata Māryām which shares a basilica layout, and bears an inscription dedicating the work to the negus Yëkunno 'Amlāk, the Ethiopian ruler who restored the Solomonic Dynasty. This would serve to indicate that its origin dates to the last quarter of the thirteenth century.¹³

Significantly, the rare and complex geometric construction etched on the grate of a window of Wālē Iyasus fully corresponds to that of a painted decoration on the intrados or interior curve of an arch found in the basilica of Yëmrëhanna Krëstos (Figures III-27, III-28), providing yet another feature of not only stylistic but also chronological commonality.



Figure III-27



Figure III-28

Figure III-27. Decoration of the intrados of an arch in the basilica of Yëmrëhanna Krëstos (photograph: Kurt Stehman)

Figure III-28. Grate of a window of the basilica of Wālē Iyasus (from Lepage & Mercier 2012: 97, fig. 5.22)

The Monolithic and Semi-Monolithic Basilicas in Lālibalā

Figure III-29. Plan of the basilica of Bēta 'Amānu'ēl (from Bianchi Barriviera 1963, pl. 39)

Figure III-30. Plan of the basilica of Bēta Māryām (from Bianchi Barriviera 1963, pl. 13)

Figure III-31. Plan of the basilica of Bēta Libānos (from Bianchi Barriviera 1963, pl. 37)

At this juncture, it seems appropriate to examine the possible correspondence between the structural evolution observed in the cave basilicas and that of another series of basilicas that have been specifically hewn out of a single block of stone set inside vast trenches. These renowned monolithic and semi-monolithic structures occupy a place of international recognition as a World Heritage Site in the remote town of Lālibalā. Though consistent in architectural and decorative style with the tradition of construction in Ethiopia, they also reflect the typological and structural models of the basilicas of the Mediterranean world.

In order to be able to create these basilicas, it was necessary, after having identified the site, to make a preliminary outline on the ground¹⁴ that would indicate the dimensions of the ground plan, in keeping with a preordained design. This, in turn, would be based on the hypothetical width, and the length would follow according to precise ratios.¹⁵ These predetermined ratios have remained virtually a constant characteristic common to basilicas from the outset.

By digging a trench around the predetermined footprint (usually out in the open), the facades gradually took form, including windows through which light could penetrate the interior, and strategically excavated columns and arches to support the roof. The rhythmical repetition of the elements of the facades would thus guide that of the interiors, becoming their integral point of reference.

Figure III-29

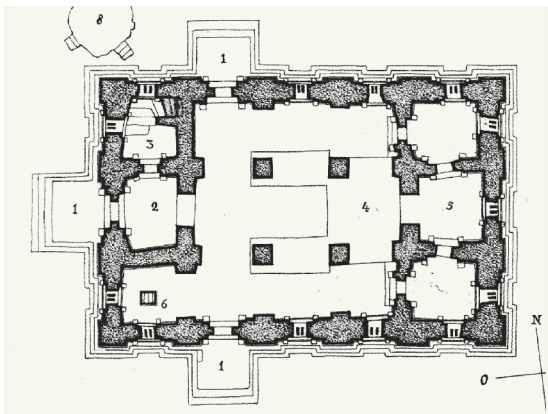


Figure III-30



Figure III-31

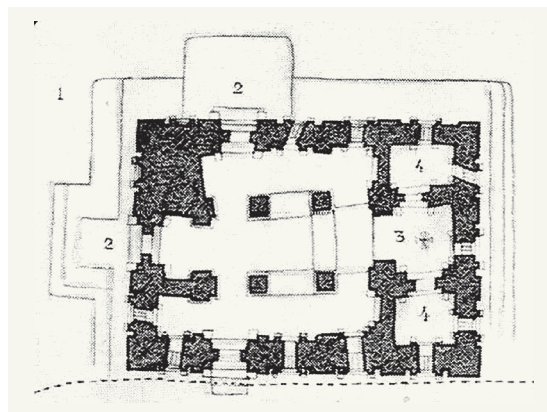


Figure III-32

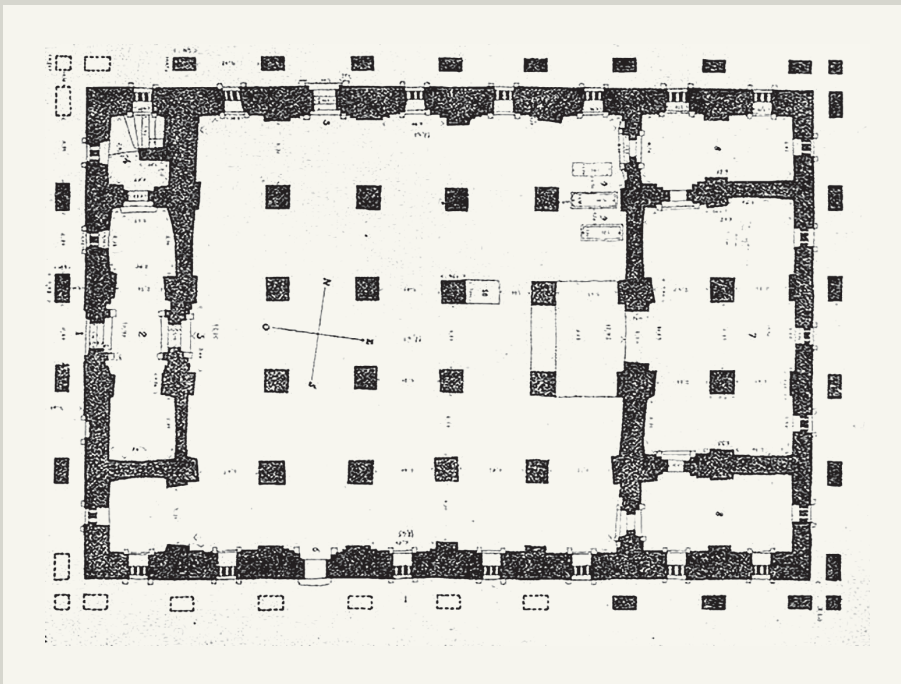


Figure III-33



Figure III-32. Plan of the basilica of Bēta Mādhane 'Alām (from Bianchi Barriviera 1963, pl. 18)

Figure III-33. Exterior of the basilica of Bēta Mādhane 'Alām (photograph: Mario Di Salvo)

The points of access, traditionally placed at the front and at the side at the position of the first span of the hall, were indicated by simple stepped podia descending into the basilica of Bēta 'Amānu'el (Figure III-29)¹⁶ and the semi-monolithic basilica of Bēta Libānos (Figure III-31)¹⁷. These two basilicas face south on a large flat area, with the other sides surrounded by an elevated walkway excavated in the rock above. The accesses to the basilica of Bēta Māryām¹⁸ (Figure III-30) were even sheltered by small roofed porches that are somewhat reminiscent of those already observed in the basilicas of Dabra Salām Mikā'el (Figure II-16) and Zarēmā Giyorgis (Figure II-26).

Unlike the aforementioned basilicas with three aisles, in the monolithic basilica of Bēta Mādhane 'Alām,¹⁹ the typological variant with five aisles was adopted (Figure III-32). Its point of reference is readily in evidence in the Aksumite basilica of Māryām Šeyon at Aksum (Figure I-3), which still existed as described by Father Alvarez in the first half of the sixteenth century.²⁰

Raised on a high base, the basilica is surrounded by a narrow walkway bordered on four sides by tall pillars that support the decorated cornice of the double-pitched roof, on each of which eight large arches are sculpted on the extrados (Figure III-33). The correspondence of the external pillars²¹ and the roof arches with the internal subdivisions provides clear evidence of precisely how the basilica was excavated, starting with a regulating exterior grid that supplied the coordinates for the internal structuring.

In the Lālibalā complex, as in the cave basilicas, we can see the progressive abandonment of the typical Aksumite construction techniques, with a significant movement away from an external profile with alternating protruding and recessed parts, via the reduction of the former to simple pilasters, to a completely rectilinear design. Even the marked setback on the eastern facade of the outer wall of the sanctuary has been eliminated. The same progression is true of the construction system, going from overlaid bands of stone and wood, to differently structured rows of stones, and finally completely level and horizontal masonry.

The monolithic basilica of Bēta 'Amānu'el (located in the quarter of Lālibalā considered to have been part of the original layout), raised on a podium of three steps, is reminiscent of the basilica of Yēmrehanna Krēstos in terms of the external masonry, which is sculpted, though without corner blocks, in alternating protruding bands without 'monkey heads' (Figure III-34). According to the observations made by Alvarez in the first half of the sixteenth century:



Figure III-34

The walls of this church possess this characteristic to a greater extent than others, namely that one sees one order and a course protruding by two fingers, and the other indented [by the same amount], and all of this wall is carved like this, starting from the bottom of the steps, all the way to the top of the church [...] and the entire wall runs in this manner and with this width.²²

The protruding parts of the masonry, however, are not equivalent to, or associable with, those already seen in the basilica of Yēmrēhanna Krēstos, since they have the characteristics of true pilasters placed to correspond with the internal pillars. Only the openings of the first and third orders exactly imitate the traditional wooden framework, while those of the second order extend upward with a round arch.²³

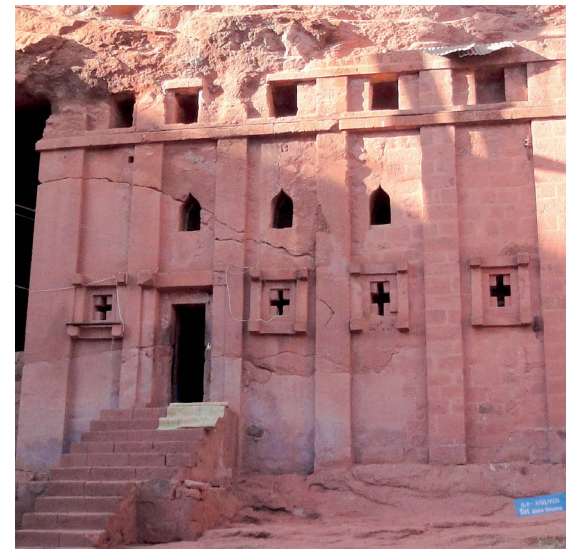


Figure III-35

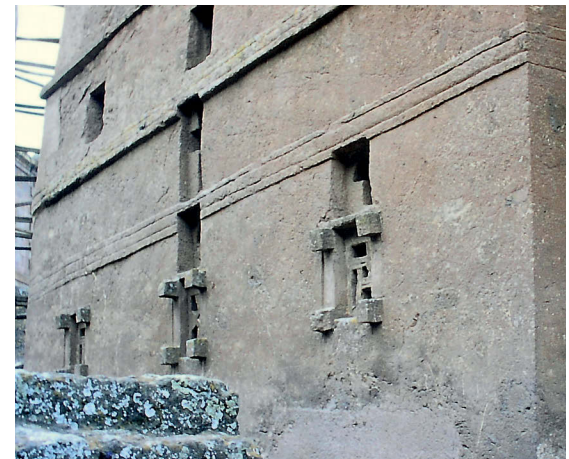


Figure III-36

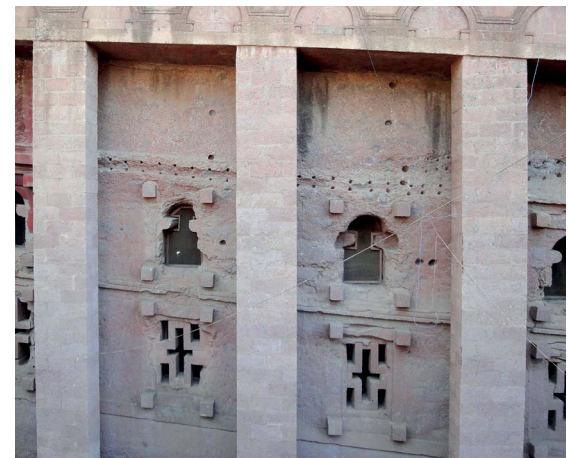


Figure III-37

Figure III-34. Western facade of the basilica of Bēta 'Amānu'el (photograph: Mario Di Salvo)

Figure III-35. Southern facade of the basilica of Bēta Libānos (photograph: Mario Di Salvo)

Figure III-36. Eastern facade of the basilica of Bēta Māryām (photograph: Mario Di Salvo)

Figure III-37. Exterior of the basilica of Bēta Mādhane 'Alām (photograph: Mario Di Salvo)

Figure III-38. Cross-section of the basilica of Bēta 'Amānu'el (from Bianchi Barriviera 1963, pl. 39)

Figure III-39. Cross-section of the basilica of Bēta Maryām (from Bianchi Barriviera 1963, pl. 14)

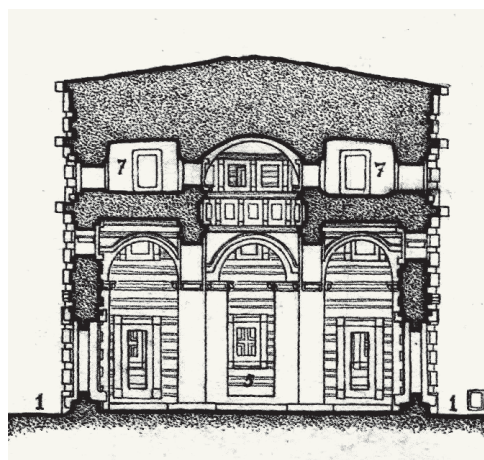


Figure III-38

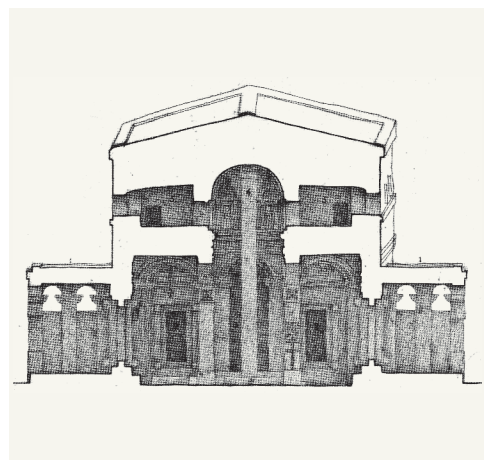


Figure III-39

On the facade, the courses reflect the impost (or support) level of the ceilings of the lateral aisles and galleries respectively, underlining the correspondence of interior and exterior.

Although it is located in what is most likely the original part of Lālībālā and raised on a podium which has now almost totally worn away on the south side, the semi-monolithic basilica of Bēta Libānos replicates the protruding pilasters on the facades found in the basilica of Bēta 'Amanu'el, but no longer features the typical masonry pattern of alternating protruding horizontal bands; by contrast in this case, the walls are completely smooth.

The pilasters are intersected at the top by two cornices between which deep false windows are set that could have brought light into the galleries. The windows of the first order represent the typical Aksumite framing, while those of the second are completed at the top by an inflected or modified arch that is foreign to the Aksumite tradition, reworked perhaps under the possible influence of Armenian, as opposed to Islamic, models (Figure III-35).²⁴

From the outside, the walls of the basilica of Bēta Māryām, set on a low step at the base, are completely smooth, without recesses or protrusions or pilasters, simply presenting three rows of stone that in the progressive advance of the excavation determine the levels of the inner structure: the first of the *matroneum*, the second of the ceiling of the lateral aisles, the third of the corbels on the pillars. Again, only the first set of windows features the typical Aksumite configuration (Figure III-36).

The exterior walls behind the colonnade of the basilica of Bēta Mādhane 'Alām are equally smooth, and the upper cornice indicates, on the outside, the level of the ceilings of the aisles, while the second indicates the impost or support level of the internal arches (Figure III-37).

In the monolithic basilicas of Bēta 'Amānu'el (Figure III-29) and Bēta Māryām (Figure III-30), the narthex is reduced in width to the north by the stairwell leading to the upper level of the galleries, and to the south by a chamber opening onto the southern aisle. The semi-monolithic basilica of Bēta Libānos (Figure III-31), due to the incomplete reproduction of the same model, might be considered unfinished inasmuch as the profile of the stairwell was not excavated, but set aside in the plan, to reach similarly unexcavated balconies reflected by windows on the facade.²⁵

In the basilica of Bēta Mādhane 'Alām, the narthex expands accordingly across the width of the three central naves. The stairwell to the north of the vestibule leads nowhere, and the chamber to the south is to all intents and purposes a continuation of the interior of the basilica (Figure III-32).



Figure III-40

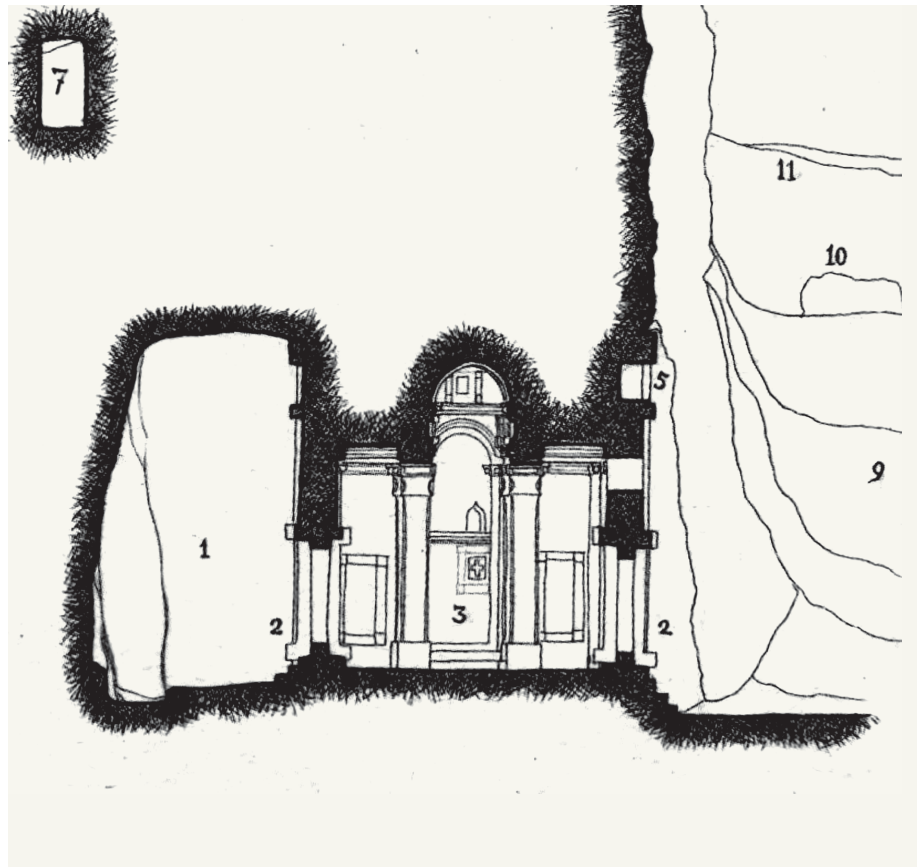


Figure III-41

The inner structure of the halls of the monolithic basilicas of Bēta 'Amānu'ēl and Bēta Māryām are identical in type: an almost square plan, subdivided into spans equal to the number of aisles by intermediate pillars that support architraves or arches on which are affixed, on one side, the flat ceiling framework of the lateral aisles, and on the other – along the central nave – the clerestory which has fenestrated walls to bring light to the innermost part of the hall.

The central naves are covered by a barrel vault flanked by galleries placed over the lateral aisles (Figures III-38, III-39). Alvarez provides us with the following detailed description of the basilica of Bēta 'Amānu'ēl:

This church has another feature [...] a sacristy above, into which one ascends by means of a staircase like a snail, and it is not very high, since a very tall man [...] would have to bend his head. It is as flat as where the floor runs. They use this to store the vestments and church ornaments.²⁶

Figure III-40. The pillar to the peak of the barrel vault of the central nave of the basilica of Bēta Maryām (photograph: Mario Di Salvo)

Figure III-41. Cross section of the basilica of Bēta Libānos (from Bianchi Barriviera 1963, pl. 37)



Figure III-42

Figure III-42. Interior of the basilica of Bêta 'Amānu'ēl (photograph: Mario Di Salvo)

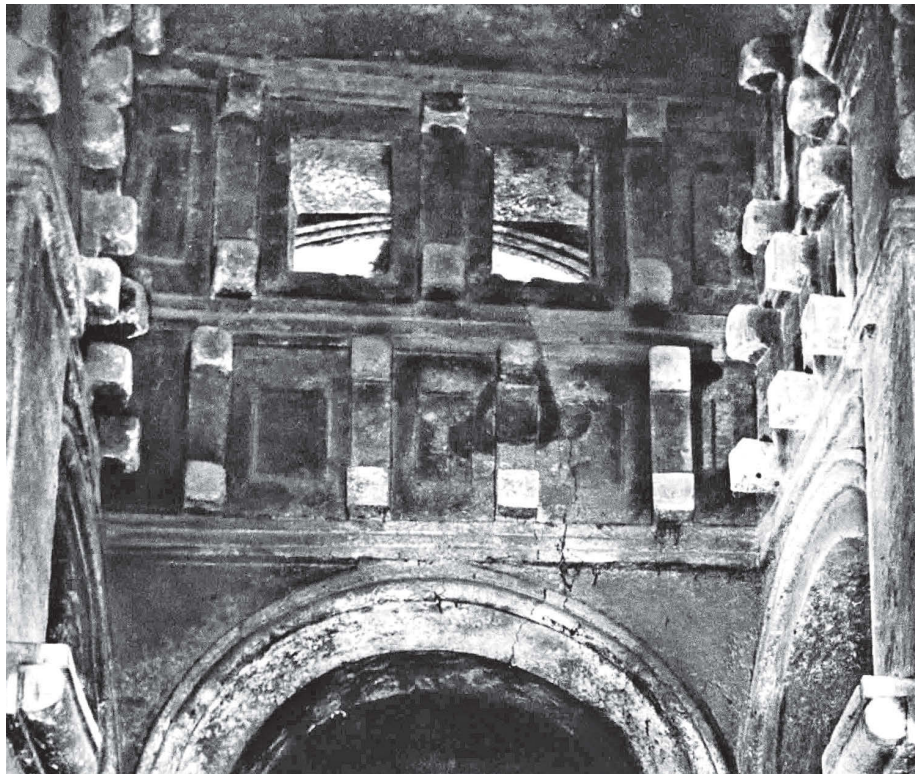


Figure III-43. Interior of the basilica of Bēta 'Amānu'ēl (from Buxton 1970: 63)

Figure III-43

The basilica of Bēta Māryām presents a unique feature, a tall pillar in front of the triumphal arch that rises to the peak of the barrel vault of the central nave. Not only does this pillar perform a load-bearing function, but it also embodies a unique symbolism. Various interpretations have been discussed in this regard,²⁷ albeit they are all outside mainstream traditional doctrine, and they suggest that it represents the 'Celestial Ray', referred to by Ethiopians as *'amdā bérhan* ('Pillar of Light').²⁸ From the time in which Francisco Alvarez visited the basilica in the sixteenth century, it was reverently entirely covered in fabric: as he wrote, 'there is furthermore a very tall column in the cross vault, over which a canopy is placed.'²⁹ The cross section of the semi-monolithic basilica of Bēta Libānos represents a more approximate reproduction of the model of reference, since in the central nave the space generally set aside for the clerestory is occupied instead by a barrel vault (Figure III-41).

In the basilica of Bēta 'Amānu'ēl, the square intermediate pillars of the central nave have corbel capitals that are equal in width to the sides of the pillar, while on the other faces they are smaller and the longitudinal arches rest on them. At the sides of the central nave, on the other hand, the pillars continue upward in the form of pilasters, going beyond the corbel capitals, the band of the metope frieze



Figure III-44

Figure III-44. Interior of the basilica of Bēta Māryām (photograph: Mario Di Salvo)

Figure III-45. Interior of the basilica of Bēta Māryām (photograph: Mario Di Salvo)



Figure III-45

and the fenestrated clerestory – corresponding to the galleries – to join the arched ribs that subdivide the barrel vault crosswise.

Bēta 'Amānu'ēl, therefore, is singular inasmuch as it is the one basilica that appears to be most influenced by the Romanesque basilicas built outside Ethiopia. This influence is, however, transposed into traditional Ethiopian terms due to the continuity of the linear framework, which extends from the pillars to above the vault (Figures III-42, III-43).

With reference to the progressive separation between the traditional forms and stylistic characteristics of Aksumite origin, one feature in these basilicas that may be of significance is the preservation or abandonment of the typical metope frieze at the joining of the roof of the lateral aisles in the central nave. As in the cave basilica of Yēmrehanna Krēstos (Figure III-2), at Bēta Māryām too we can observe the absence of the typical metope frieze, similarly replaced by a broad band of moulding that runs above the arches of the central nave, and onto which the windows of the clerestory open either directly (alternating with panelled frames) to provide natural light for the hall interior, or indirectly through the balconies (Figure III-44). The intermediate pillars have cubical capitals with smoothed corners on which overhanging corbels have been placed (Figure III-45).³⁰

In the basilica of Bēta Libānos, corbels protruding towards the central nave are missing and on the architraves only faint vestiges of the metope frieze remain, placed at the level of the ceilings of the lateral aisles (Figure III-46).

Between the first and second pillars on both sides of the central nave of these monolithic basilicas, the floor level is raised by a step that meets in the presbytery area in front of the triumphal arch to form a single platform for liturgical proceedings, with no traces of balustrades remaining. The chambers connected to the sanctuary open towards it and also towards the lateral aisles.³¹

In the basilica of Bēta Libānos, the traditional openings towards the lateral aisles have been faithfully preserved. In addition, in the sculpted domes over the sanctuary of the basilicas of Bēta 'Amānu'ēl and Bēta Māryām, an imitation of the earlier version of domes made with radial ribs has been retained.

The monolithic basilica of Bēta Mādhane 'Alām is divided into five naves and five spans by sixteen square-section pillars, connected in the lateral aisles by arches set on supporting stone brackets or corbels of a smaller width than that of the pillars. Arches are repeated in relief on all the corresponding areas of the outer walls. In the central nave, a continuous double band runs above the arches, on which a shallow barrel vault is set, but without the inclusion of either the metope frieze or the clerestory (Figures III-47, III-48).



Figure III-46

Figure III-46. Interior of the basilica of Bēta Libānos (photograph: Mario Di Salvo)

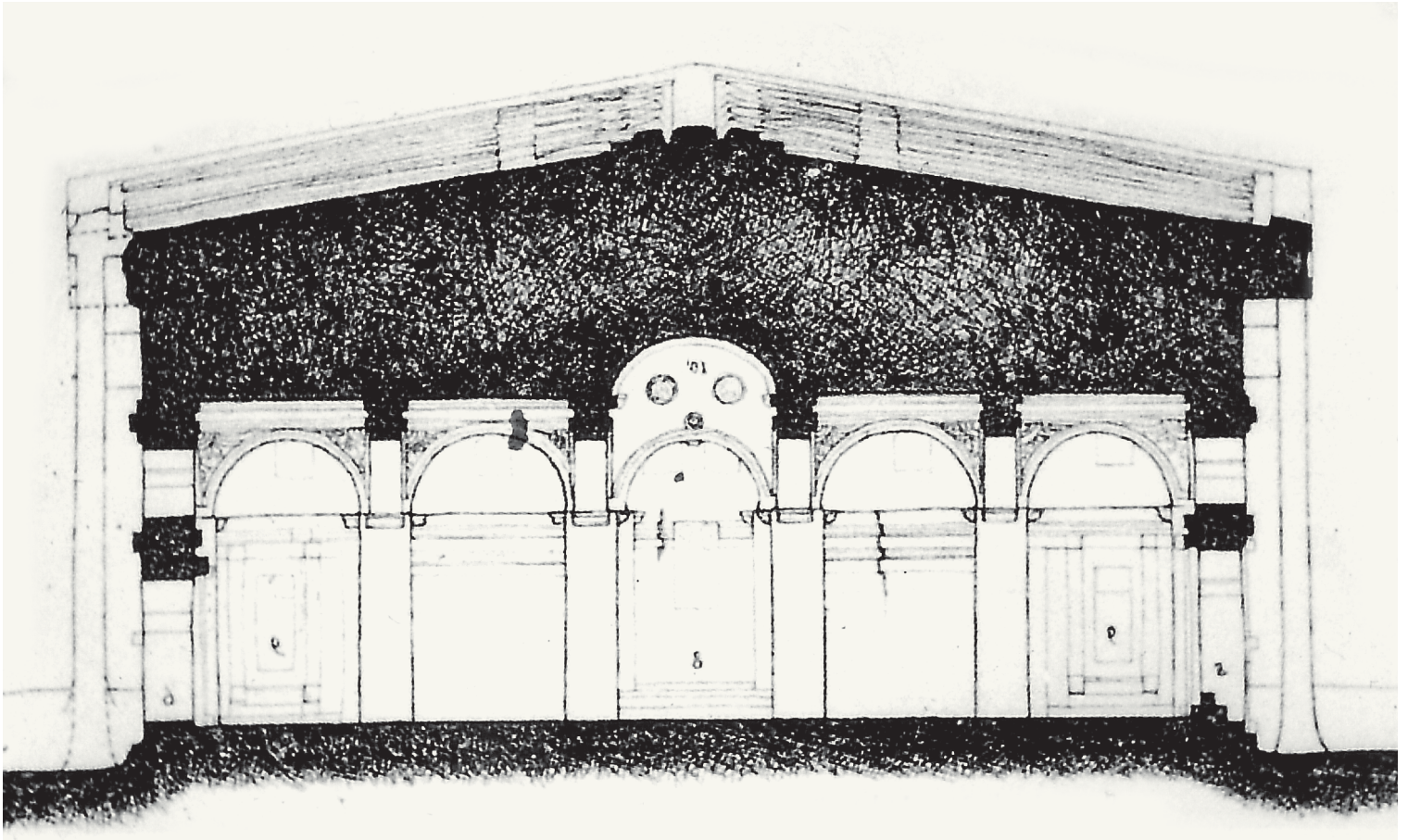


Figure III-47

If we rely on the documentation that indicates the existence of the monolithic basilicas of Bēta Māryām as early as 1204³² and of Bēta Mādhane 'Alām straddling the twelfth and thirteenth centuries,³³ the structural interpretation would logically lead us to consider it possible to date the basilicas of Bēta 'Amānu'ēl and Bēta Libānos, in the eastern quarter of Lālibalā, to the second half of the twelfth century.

Figure III-47. Cross section of the basilica of Bēta Mādhane 'Alām (from Bianchi Barriviera 1963, pl. 20)



Figure III-48



Figure III-49

Figure III-48. Interior of the basilica of Bēta Mādhane 'Alām (photograph: Mario Di Salvo)

Figure III-49. Vault of the basilica of Bēta Mādhane 'Alām (photograph: Mario Di Salvo)

The Last Ethiopian Basilicas

At this point, it should be emphasized that the corresponding structural evolutions observed in the subterranean or cave basilicas and in the monolithic or semi-monolithic basilicas examined thus far do not necessarily imply a contemporary chronological sequence, though they do reflect analogous evolutionary features characteristic of the period. We can interpret as analogous the passing on or abandonment of elements of style, modes and techniques of construction that gradually develop across the entire thirteenth century and beyond, all the way to the later basilicas of Žammadu Māryām (Figure III-50) and Bēta Lēhēm Māryām.



Figure III-51

Figure III-50. View from east of the basilica of Žammadu Māryām (from Buxton 1957: 136)

Figure III-51. Isometric view of the basilica of Žammadu Māryām (drawn by Zara Thyssen, from Gervers 2006)

Figure III-52. Wooden vault of the basilica of Žammadu Māryām (from Bidder: 105, fig. 67)

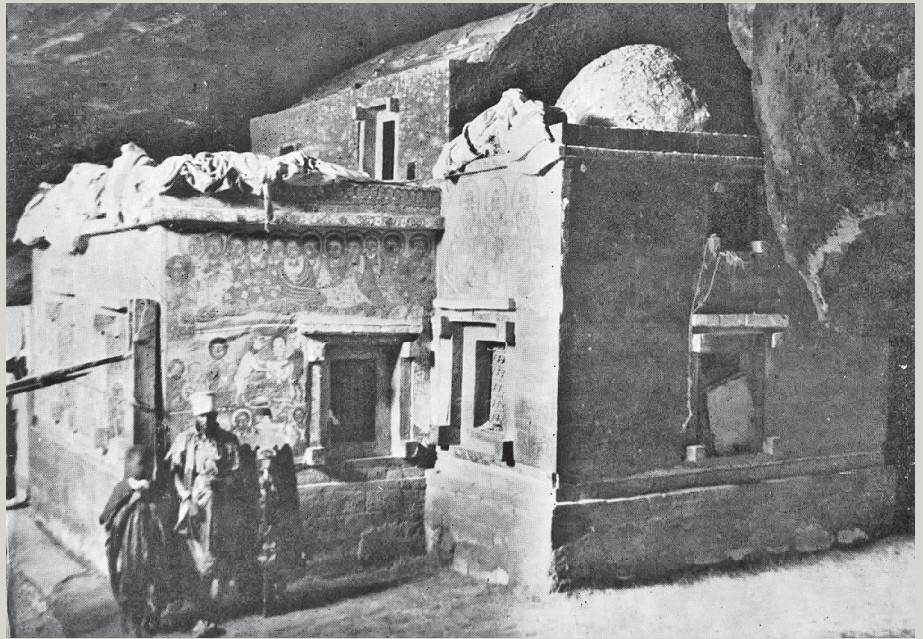


Figure III-50

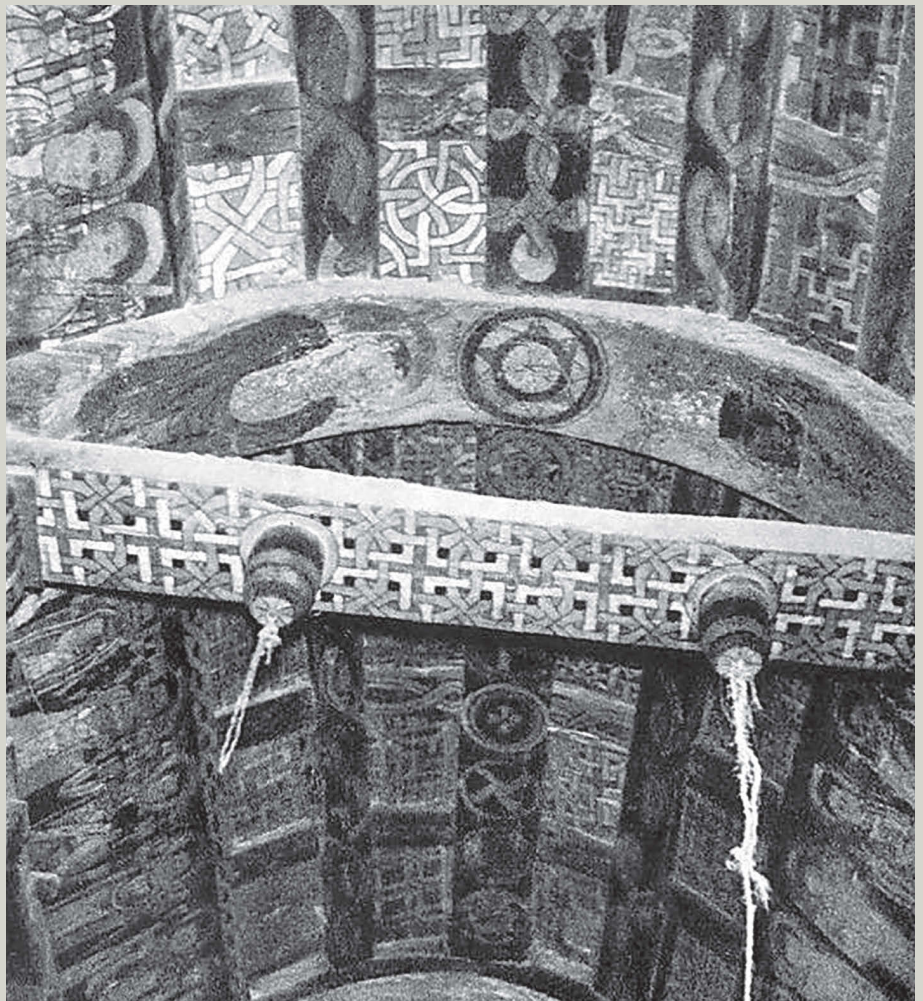


Figure III-52

Constructed within a cavern in a mountainous region of eastern Lasta, the basilica of ʿŽammadu Māryām³⁴ was founded, according to the local tradition, by the *aṣe* Yēkunno ʾAmlāk (1270–85). There are, however, certain scholars who have assigned this restoration to the period of a later monarch, *aṣe* ʾĀmda Šēyon (1314–44).³⁵

The outer walls of the basilica have been constructed with rectilinear masonry of hewn blocks which form a homogeneous surface on a solid base. Actually, the fact that the walls of the lateral aisles (lower than those of the vestibule and the sanctuary) are of completely separate construction from those of the central entity could lead us to imagine a building constructed in multiple

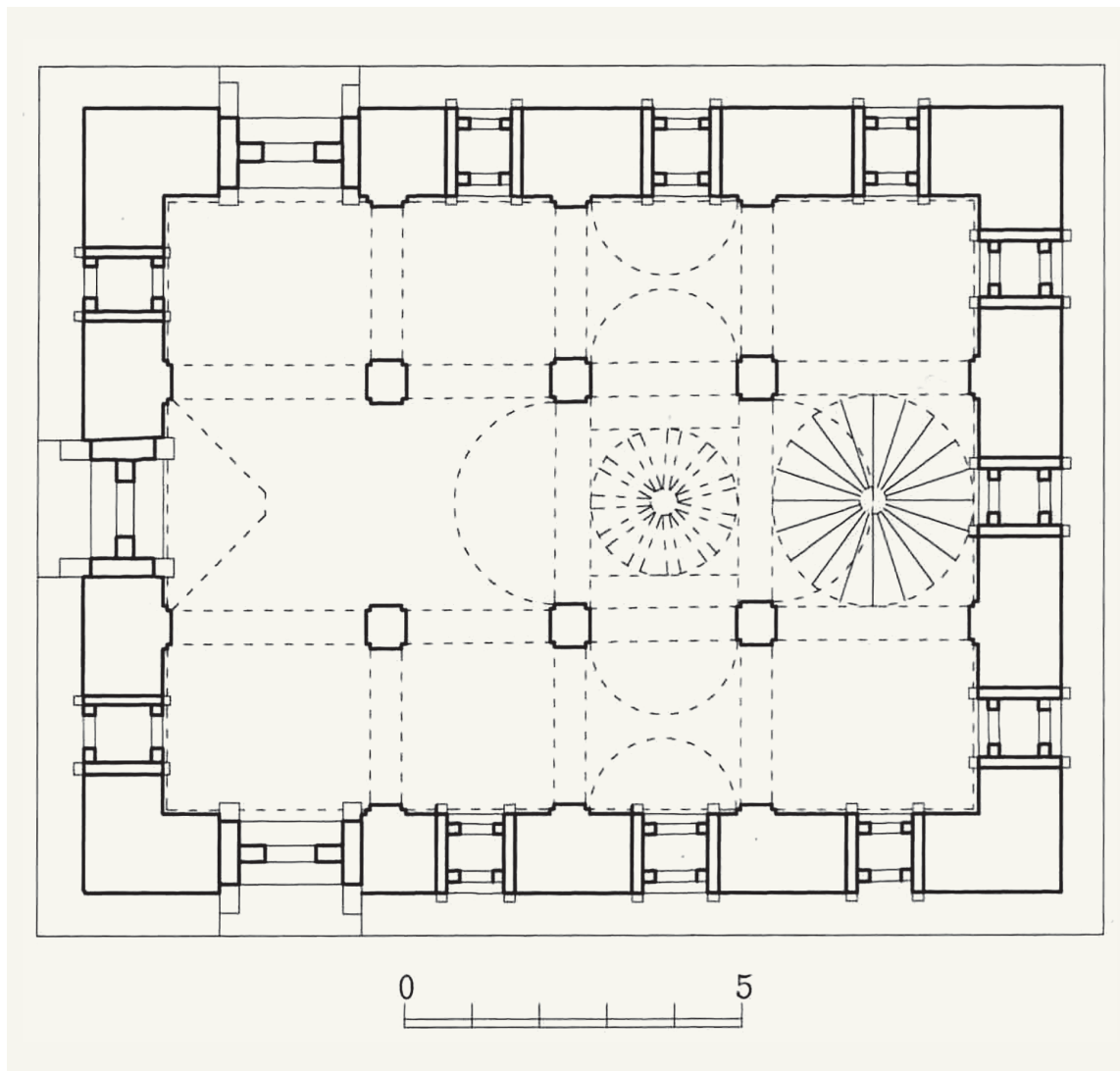


Figure III-53

Figure III-53. Plan of the basilica of Bēta Lēhēm Māryām (from Di Salvo 2000: 61)



Figure III-54

Figure III-54. Central nave of the basilica of Bēta Lēhēm Māryām (photograph: Michael Gervers)



Figure III-55

Figure III-55. Internal pillar of the basilica of Bēta Lēhēm Māryām (photograph: Michael Gervers)

Figure III-56

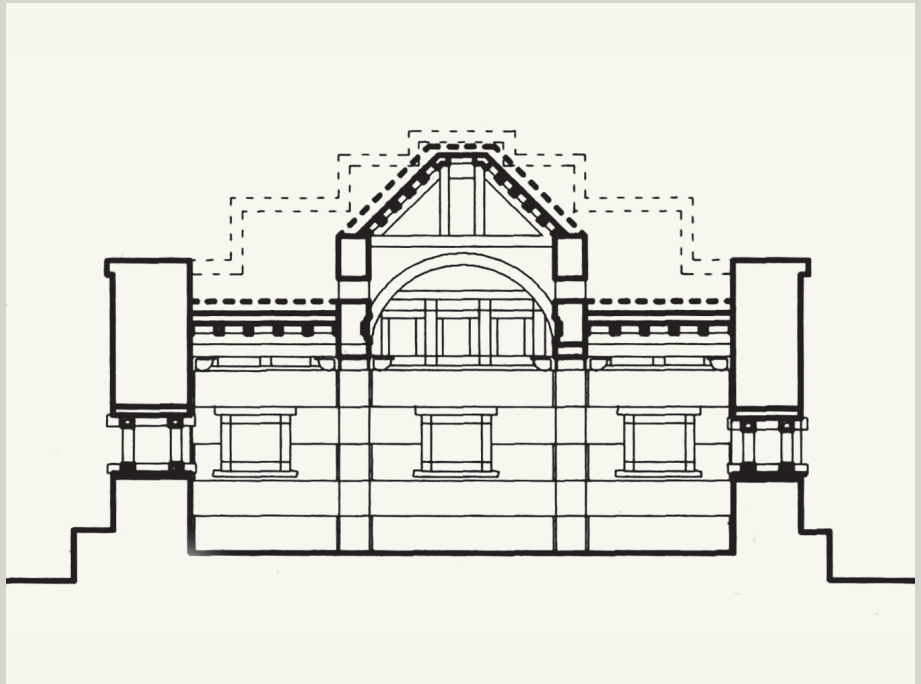


Figure III-56. Cross section of the basilica of Bēta Lēhēm Māryām (from Di Salvo 2000: 60)

Figure III-57

Figure III-57. Trussed roof of the central nave of the basilica of Bēta Lēhēm Māryām (photograph: Michael Gervers)





Figure III-58

Figure III-58. Roof of the transept of the basilica of Bēta Lēhēm Māryām (photograph: Michael Gervers)

phases, with an original style corresponding to that of a church of tripartite alignment³⁶ (atrium, nave, sanctuary), later transformed into a basilica with the addition of the lateral aisles (Figures III-50, III-51) and the resulting formation of a fenestrated clerestory. It would in that case be entirely inappropriate to assign a cruciform layout to the basilica of Žammadu Māryām.

Given the fact that very few visitors have managed to gain entrance to this hallowed site, the photographs by Bidder published in 1959 provide rare images of the interior of the basilica of Žammadu Māryām. Coffered ceilings comprised of ornamental panels cover the entrance vestibule and the lateral aisles, while the central nave is covered by a barrel vault made using a wooden framework of arched ribs linked at the base by cords, with the gaps filled by coffers (Figure III-52). This type of vault is similar to the one found in the basilica of Endā Abuna Aragāwi at Dabra Dāmo (Figure II-7). This similarity almost certainly confirms the fact that renovations of this venerable basilica took place over an extended period of time. At Žammadu Māryām, the barrel vault is adorned with cruciform patterns, and along the first row of panels with decorative painted images of angels and saints. The style of the figurative decoration as it appears today, attributed to the fifteenth century, helps to confirm the provisional dating of the basilica.

Figure III-59. Dome over the sanctuary of the basilica of Bēta Lēhēm Māryām (photograph: Michael Gervers)



Figure III-59

Much further south, 65 km south-east of Dabra Tābor in the Gāyēnt region, the basilica of Bēta Lēhēm Māryām³⁷ (Figure III-53) also dates back to the end of the fourteenth century. Like the cave basilicas, it has neither a narthex nor an endonarthex. Instead side doors offer access to the hall at the first span of the aisles. Perhaps for this reason, in the nineteenth century it was encased by a circular superstructure with a conical roof protecting the perimeter of the building.

With its rectangular plan, the outer wall of this basilica demonstrates the type of rectilinear masonry in hewn blocks of stone, forming a homogeneous surface on a solid base.³⁸

In its ground plan, the basilica appears uniformly subdivided into three naves by six pillars; however, only by looking at the vertical sections can the arrangement of the internal space be established. In effect, here we can see that phase of evolution that unites the longitudinal area with the crosswise space of the transept. In fact, only the first two spans feature three aisles, while a transept is attached to the third. The only comparable architectural references within Ethiopia are the semi-monolithic churches of Tigray, from which it would be unrealistic to hypothesize a direct derivation.

The central nave of Bēta Lēhēm Māryām features architraves with the typical metope frieze above and a series of five wide lunettes (not corresponding in their arrangement to the structural framework below) to form the clerestory.

The stone pillars are marked by the alternation of stacked blocks bevelled at the corners with sharp-cornered blocks, generating a profile in some ways similar to that of the pillars of the basilica of Yēmrēhanna Krēstos (Figure III-55). The lunettes are reminiscent of a similar design observable much earlier on the cornice of the underground church of Bēta Masqal, as well as the one found in the large monolithic basilica of Bēta Mādhane ‘Alām at Lālibalā.

The ceilings of the lateral aisles are flat with a wooden framework, while over the central nave we find the same type of trapezoidal truss with paired posts that has spanned the centuries with only minimal variations. These characteristics are readily in evidence on the central nave of the basilicas of Zarēmā Giyorgis, Yēmrēhanna Krēstos and Wālyē Iyasus (Figure III-57).

The wings of the transept are covered by barrel vaults, again with a framework in wood (Figure III-58), and the intersection with the central nave is topped by a dome with arched wooden ribs, structurally similar to the one placed over the sanctuary (Figure III-59).

Reflecting the evolution of liturgical practices and organizational changes that followed from it, the presbytery of the basilica of Bēta Lēhēm Māryām is completely open, no longer with connected chambers and without any demarcation on the floor to set it apart.

Although it is unfortunately impossible, it would most certainly have been of great value to have had at least the possibility of envisioning the architecture of the ‘royal’ basilicas built subsequently by various Solomonic sovereigns: Mashālā Māryām³⁹ in Manz, a region to the north-east of Šawā, near what was the royal camp of *aṣe* Ba’ēda Māryām (1468–78); Martula Māryām⁴⁰ in Goḡḡām, founded between 1490 and 1522 by the *’ēṣṣē* Ēlēni, crowned wife of *aṣe* Zar’a Yā’qob and Makāna Šēllāsē⁴¹ in Amhārā, established at the turn of the fifteenth and sixteenth centuries by *aṣe* Nā’od.

Regrettably, today only faint traces of these once regal monuments remain as a result of the protracted invasions of the Christian kingdom from 1528 to 1543 by the powerful warlord Ahmad ibn Ibrāhīm al-Ghazī, known as Grañ (the Left-Handed). The ruins of these royal basilicas have been examined and described as fully as possible given the condition of their remains. To date, however, adequate surveys or an in-depth architectural analysis have yet to be undertaken. Hence the possibility of any potential interpretation of the final evolutionary developments of these particular Ethiopian basilicas remains unresolved.

The sixteenth century witnessed the introduction of churches with a central plan, mostly circular but also square, together with the revival of the ancient typology of tripartite rectangular churches featuring three successive areas. Among their number are Ṭānā Qirqos, Dāgā 'Ēstifānos, Gondar, and Dabra Bērhān Šēllāsē. It is argued that Dabra Bērhān Šēllāsē in Gondar was originally a round church, rebuilt as a basilica in the early nineteenth century. A section of the original rotunda is visible at the east end of the church.

Slowly but surely, the traditional and centuries-old continuity of the basilica in Ethiopia virtually disappeared and new forms took precedence. Only in 1943, after the emperor Ōayla Šēllāsē (Haile Selassie) opened the basilica of the Holy Trinity in Addis Ababa, did the larger communities begin to undertake the construction of new basilicas: these facilities were 'modern' and therefore not always welcomed with enthusiasm, as they were considered to smack of foreign influence and, as such, were not regarded as being fully in keeping with traditional Ethiopian orthodoxy. Inevitably – as with architectural design throughout the modern world – change and innovation are rarely greeted as a universal blessing and controversy will undoubtedly forever remain a part of the process.

¹ Alvarez: f.210; Monti della Corte: 154- 66, pl. XXXVII-XXXVIII; Bidder: 44-48, pl. 52-62; Miquel: 43; Bianchi Barriviera 1963: 81-91, pl. 55, 57-58; Sauter 1963: 262; Gerster 1970: 109-14, ill. 110-26; Bianchi Barriviera 1988: 72-73, 75-76; Phillipson 2009: 74-81; Lepage & Mercier 2012: figs. 5.5, 6.7; Gerdmar & Olsson.

² Lepage & Mercier 2012: 28. An inscription on an arch bears the name of the negus Na'akw'ato La'ab, but instead the basilica could be from the time of the reign of his uncle Lālibalā, and thus earlier.

³ Miquel: 146-48, pl. LXXV a-c; Sauter 1963: 270; Gerster 1970: 109, ill. 100-08; Gervers 2006.

⁴ Sauter 1963: 270; Gerster 1970: 109-10.

⁵ Alvarez: f.210 v. Based on the 1550 Italian translation of the account of the travels of Francisco Alvarez originally published in Portuguese in 1540: '[...] nella quale a mio giudicio vi potriano stare tre gran navi con li lor alberi [...] La chiesa che è sotto detta grotta, è grande come un Duomo et sedia cattedrale, et ha belle navi et ben adorne et ben lavorate, et tutte in volto. ha tre bellissime et ben ornate cappelle. L'entrata di questa concavità è da levante, e le cappelle sono voltate verso questa entrata.'

⁶ The Gadl of Yēmrēhanna Krēstos in fact precisely describes the preliminary phases for the construction of the basilica: see Marrassini. The basilica of Yēmrēhanna Krēstos was attributed to the current négus of the Zagwe dynasty, whose reign is commonly thought to date back to the start of the twelfth century. According to the Gadl (or 'spiritual struggle', an Ethiopian hagiography), written in the fifteenth century, the site of the basilica was originally called Wagra Šēyon and there was a church dedicated to Qirqos (St Cyriacus). The change of dedication was therefore only documented centuries later, and it might be plausible to assume that the writing was an attempt on the part of the so-called Solomonic dynasty, re-established after 1270, to legitimize their Zagwe predecessors, attributing the name of Yēmrēhanna Krēstos to the basilica. Michael Gervers dates the basilica to halfway through the thirteenth century on the basis of the imagery of the painted decorations, and this dating was confirmed by Emmanuel Fritsch on the basis of the liturgical articles read by the archaeologists of the 'Mission Lalibela' directed by Claire Bosc-Tiessé and Marie-Laure Derat in 2013.

⁷ As already observed, for example, at Dabra Salām Mikā'el (Figures II-17-II-19) and in other earlier basilicas.

⁸ Which vividly recall the Roman basilica type; see Capuani.

⁹ Bianchi Barriviera 1963, pl. 55 erroneously indicates two raised parts to the north and south between the pillars of the second span.

¹⁰ Where Monti della Corte indicates the presence of two supplementary altars (Monti della Corte: 156)

¹¹ Parenthetically, we should also mention the remaining traces of the perimeter walls revealed by excavation of the basilica of Gabrē'el built on an amba of the Manz, north of Šawā, thus in a region much further to the south, with a rectangular plan of 7.4 x 10.5 m (the larger side in the ratio thus corresponding to the diagonal of the square on the smaller side). Its masonry still displayed, in its traces, the protruding and recessed segments that gave the whole of the elevation a perfect and refined symmetry, but with rubble masonry between two surfaces of hewn stones. One entered the sanctuary at the centre and also from the north, through a door connecting the northern part of the sanctuary with the northern nave (Jouquand, Farago-Szekeres & Ayenachew). Radiocarbon dating of a wooden pillar gives a date in the fourteenth century, but an even more remote dating assigned to a piece of wood employed as a threshold (977/1153) could also be brought into consideration (Derat & Jouquand: 395). The wooden structure that probably once divided the hall into three aisles was completely destroyed by fire and its configuration can therefore only be hypothesized.

¹² See Figure III-15. The plan is taken from photos of Emmanuel Fritsch and Michael Gervers, with the help of a few measurements by Jan Retsö of the team who visited the basilica in 2015 (Ewa Balicka-Witakowska, Michael Gervers, Jan Retsö and Jacek Tomaszewski).

¹³ Balicka Witakowska 2004.

¹⁴ The irregularities seen as skewed in the plan could be based on the difficulty of perfect outlining on uneven ground.

¹⁵ A rectangle in which the longer side corresponds to the diagonal of the square built on the shorter side at Bēta Māryām (11 x 15.5 m), and Bēta Mādhane 'Alām (20 x 33 m), or of 1:1.5 at Bēta 'Amānu'el (11.6 x 17.5 m).

¹⁶ Alvarez: f.214-15; Conti Rossini 1928: 314; Monti della Corte: 63-67, pl. XVII-XVIII; Miquel: 135; Bianchi Barriviera 1963a: XIX, 10-19, pl. 23-24, 27, 39-40, 56; Buxton 1970: 110, fig. 23, pl. 58; Gerster 1970: 103, fig. 87-88; Bianchi Barriviera 1988, pl. 38-40; Phillipson 2009: 137-43; Lepage & Mercier 2012: 57-61.

¹⁷ Miquel: 135; Monti della Corte: 71-73, pl. XX; Bianchi Barriviera 1963: XIX, 49-52, pl. 23-24, 35, 37, 57; Buxton 1970: 112, fig. 24; Bianchi Barriviera 1988, pl. 36-37; Gerster 1970: 10, figs 89-90; Phillipson 2009: 143-45; Lepage & Mercier 2012: 61-62; Gerster 1970: 95-97, figs 89-90.

¹⁸ Alvarez: f.213; Conti Rossini 1928: 312-13; Monti della Corte: 47-52, pl. VII-X; Miquel: 137; Bianchi Barriviera 1963: XVIII, 49-61, pl. 3, 11, 13-15, 57-58, 60; Buxton 1970: 110, pl. 57; Gerster 1970: 95-97, figs 61-75; Bianchi Barriviera 1988, pl. 12-16; Phillipson 2009: 160-65; Lepage & Mercier 2012: 51-54, 199-205.

¹⁹ Conti Rossini 1928: 312; Monti della Corte: 40-47, pl. V-VI; Miquel: 135-37; Bianchi Barriviera 1963: XVIII, 61-76, pl. 3, 18-20, 56; Buxton 1970: 111, fig. 23; Gerster 1970: 92-93, figs 55-58; Bianchi Barriviera 1988: pl. 17-21; Phillipson 2009: 155-59; Lepage & Mercier 2012: 46-50.

²⁰ Alvarez: 203v-204.

²¹ The external pilastrade, seen also in the basilica of Māryām Šēyon at Aksum (fig. I-3), and the design of crossed arches engraved on the pitched roofing, are similar to those of the underground basilica-plan church of Gannata Māryām, already existing prior to 1270 when it was entirely decorated with a pictorial cycle 'comme un tentative, de la part de Yēkuno 'Amlāk, de se substituer aux rois Zagwe, y compris dans le domaine de l'architecture religieuse' (Derat 2003: 225). However, the lack of a high central nave compared to the lateral aisles (which can permit direct lighting in addition to the light from the more distant perimeter openings) implies that certain Ethiopian cliff churches, even though they have a basilica plan, should be considered simply as 'hypostyle halls'.

²² Alvarez: f.214. Based on the Italian translation of 1550: 'hanno di più li muri di questa chiesa che non hanno le altre, cioè che si vede un ordine et un corso uscir fuori due dita, et l'altro entrar dentro, et così è intagliato tutto il detto muro, cominciando a basso dalli scalini sino alla sommità della chiesa [...] et di questa maniera et larghezza corre tutto il pariete, o muro.'

²³ A motif derived from the design of window grates of Yēmrēhanna Krēstos, though it could also be based on the triumphal arches.

²⁴ Arches of this type are also seen in the facade of Bēta Gabrē'ēl-Rufā'ēl in the same quarter of Lālibalā: 'evidence may also be discerned that the points to the apices are at least partly the result of secondary recutting' (Phillipson 2009: 130). Outside of Buddhist India, by way of Islamic Persia, careened arches appear starting in the thirteenth century, framing windows and tympana in Armenia (church of Enlidja), and then spreading in Islamic art and in Europe (Baltrusaitis: 277-290). This window type would later be further enhanced by phytomorphic decorations and crosses at Bēta Giyorgis.

²⁵ Similarly, at Dabra Salām Mikā'el (Figure II-16) the plan of the narthex contains the memory of the space traditionally set aside for a stairwell, though the basilica is without excavated balconies.

²⁶ Alvarez: f.214: 'Ha di più questa chiesa [...] una sacrestia di sopra, nella qual si monta per una scala fatta a lumaca, et non è molto alta, perché un huomo molto grande [...] darà sotto con la testa. È piana come il solaro dove si cammina. Si servono di questa, per tener casse di paramenti et ornamenti di chiesa.'

²⁷ Bosc Tiessé et al. 2010.

²⁸ Guéron: 120-24, in reference to the one followed by Moses (Ex. 13:22).

²⁹ Alvarez: f.213: '[...] vi è di più una colonna molto alta nella crosara, sopra la quale si appoggia un baldachino.'

³⁰ The type of capital associates it with the hypostyle basilica of Bēta Mika'ēl at Lālibalā, as well as the semi-monolithic basilica of Wēkro Qirqos (Figure II-78).

³¹ At Bēta Mādhane 'Alām, the small chamber (*cella*) of the sanctuary is as wide as three of the five central naves and the connected spaces open towards it and towards the outermost lateral aisles.

³² Lepage & Mercier 2012: 25; Derat 2010: 21-24. The basilica of Bēta Māryām is named in the evangelistary as having received magnanimous gifts from King Lālibalā.

³³ The basilica of Bēta Mādhane 'Alām is named in the evangelistary as having received similar gifts.

³⁴ Bidder: 105, fig. 67; Lepage 1972: 509-11; Lepage 1973: 75; Balicka Witakowska 2014.

³⁵ Nosnitsin & Derat: 44

³⁶ Di Salvo 2000: 64-71.

³⁷ Pakenham: 124-37; Gerster 1970: 137-40, figs 196-208; Di Salvo 1999: 61; Bosc Tiessé 2003; Phillipson 2009: 82-85.

³⁸ The rectangular plan measures 11.5 x 14.5 m (still in the ratio of more or less 3 to 4 between the smaller and longer sides).

³⁹ Hirsch & Poissonnier.

⁴⁰ Bosc Tiessé 2007.

⁴¹ Derat 2007.

Glossary

aisle in ecclesiastical architecture, a longitudinal space in a church, divided from the others by a row of two or more pillars. In a basilica, the central aisle is called the nave, flanked by the lateral aisles.

architraves in classical architecture, the lowest section of an entablature, which comes into contact with the top of the columns.

atrium entrance hall, vestibule or reception area.

balustrade a decorative railing together with its supporting balusters, often used at the front of a parapet or gallery.

bevelled cut away to give a surface that is not perpendicular to the main surfaces of a structure.

ciborium in ecclesiastical architecture, a canopy or covering supported by columns.

clerestory the upper part of the wall of a building, especially of a church nave, that contains windows.

coffers a series of sunken panels in the shape of a square, rectangle, or octagon in a ceiling, soffit or vault.

corbel a supporting piece of stone, wood, brick, or other building material, projecting from the face of a wall.

cornice the top projecting section of the part of a classical building that is supported by the columns.

endonarthex a narthex (qv.) that is placed within the main structure of the basilica.

entablature in classical architecture, the section of a structure that lies between the columns and the roof. It comprises, from bottom to top, the architrave, frieze and cornice.

extrados the exterior curve of an arch.

facade the face of a building, especially the principal or front face showing its most prominent architectural features.

frieze a horizontal band forming part of the entablature of a classical building, situated between the architrave and the cornice, and often decorated with sculpted ornaments or figures.

hypogeal occurring or existing underground.

hypogeum a large subterranean structure.

hypostyle in reference to many columns supporting a roof or ceiling.

intrados the interior and lower line or curve of an arch.

lintel a horizontal beam that supports the weight of the wall above a window or door.

maqdas innermost sanctuary of an Ethiopian Orthodox place of worship.

matroneum a gallery on the interior of a building, originally intended to accommodate women.

metope a square space between two sets of three vertical grooves or triglyphs.

narthex an area at the west end of the nave of an early Christian church, separated off by a screen or railing behind which women, catechumens or penitents were admitted.

nave the long central aisle (qv.) of a church, often with pillars on each side, where the congregation is seated.

palmette a motif in decorative art which, in its most characteristic expression, resembles the fan-shaped leaves of a palm tree.

pastophoria two eastern service rooms which flank the sanctuary in Ethiopian church architecture.

pilaster in Greco-Roman Classical architecture, a shallow rectangular column that projects slightly beyond the wall into which it is built and has a base, a shaft and a capital.

pilustrade a row of pilasters.

portico porch leading to the entrance of a building, or extended as a colonnade, with a roof structure over a walkway, supported by columns or enclosed by walls.

presbytery part of a church or cathedral, or a separate building, for the use of clergy only.

ribands flat rails attached to posts.

sanctuary the most sacred part of a consecrated building, e.g. the area around the altar in a Christian church.

stele (pl. stelai) an upright stone block, carved with decorations, usually for memorial purposes.

transenna in early Christian architecture, an openwork screen of stone or metal enclosing a sacred space.

transept a portion of a cross-shaped church that runs at right angles to the long central nave.

Bibliography

Abbreviations

AE	<i>Annales d'Éthiopie</i> , Addis Ababa 1955–
Aethiopica	<i>International Journal of Ethiopian Studies</i> , Wiesbaden 1996–
CSCO	<i>Corpus Scriptorum Christianorum Orientalium</i> , Louvain 1903–
DAE II	Daniel Krencker & Theodor von Lüpke (eds.), 'Deutsche Axum Expedition', <i>Ältere Denkmäler Nordabessiniens</i> , Berlin 1913, II
EAe	<i>Encyclopaedia Ethiopica</i> , Wiesbaden 2003–
RSE	<i>Rassegna di Studi Etiopici</i> , Roma 1941–

Alvarez, Francisco,

'Viaggio nella Ethiopia al Prete Ianni', in G. Ramusio, *Navigazioni & viaggi*,
Lucantonio Giunti, Venice 1550

Anfray, Francis,

1966 – 'Le musée archéologique d'Asmara', RSE 21 (1965), pp. 5–15

1967 – 'Matarā', AE 7 (1967), pp. 33–88

1970 – 'Notes archéologiques', AE 8 (1970), pp. 31–56

1974 – 'Deux villes axoumites: Adoulis et Matarā', *IV Congresso internazionale
di studi etiopici (Roma 10–15 aprile 1972)*, I. Sezione storica (Accademia
Nazionale dei Lincei, anno 371, quaderno 191. Problemi attuali di
scienza e di cultura), Accademia Nazionale dei Lincei, Roma 1974,
pp. 745–65 + 6 pl.

1990 – 'Les anciens éthiopiens: siècles d'histoire', A. Colin, Paris 1990

2007 – 'Mätära', EAe 3 (2007), 864a–865b

Anfray, Francis & Annequin, Guy,

'Matarā, deuxième, troisième et quatrième campagne de fouille', AE 6
(1965), pp. 49–85

Balicka Witakowska, Ewa,

2004 – 'The wall paintings in the church of Madhane Alam near Lalibela',
Africana Bulletin 52 (2004), pp. 9–29

2005a – 'Dégum', EAe 2 (2005), 126b–127b

2005b – 'Däbrä Sālam Mika'el', EAe II (2005), pp. 37–39

2007 – 'Mika'el Amba', EAe 3 (2007), pp. 959a–961a,

2010a – 'Séray Abréha wä-Asbéha', EAe 4 (2010), 628qa–630a

2010b – 'Wéqro Maryam', EAe 4 (2010), 1182b–1184b

2014 – 'Žämmädu Maryam', EAe 5 (2014), 133b–135a

Balicka Witakowska, Ewa & Gervers, Michael,

2001 – 'The church of Yemrehanna Krestos and its wall-painting: a
preliminary report', *Africana Bulletin* 49 (2001), pp. 9–47

Baltrusaitis, Jurgis,

Il Medioevo fantastico, Adelphi, Milan 1993

Bent, James Theodore,

The Sacred City of the Ethiopians, Longmans, Green and Co, London 1896

Bianchi Barriviera, Lino,

1962 – 'Le chiese monolitiche di Lalibela e altre nel Lasta-Uagh in Etiopia',
Fede e Arte, 4 (1962, October–December).

1963a – 'Le chiese in roccia di Lalibela e di altri luoghi del Lasta', RSE 18–19
(1962–63)

1963b – 'Restauro alle chiese di Lalibela', RSE 22 (1962), pp. 135–46

1988 – *Acqueforti di Lino Bianchi Barriviera. Le chiese monolitiche di Lalibela
(1939–1949)* (a cura E. Manzato), Museo Civico 'L. Bailo',
Treviso 1988

Bidder, Irmgard,

Lalibela: The Monolithic Churches of Ethiopia, Du Mont, Cologne 1959

Bosc Tiessé, Claire,

2003 – 'Betä Léhem', EAe 1 (2003), pp. 560a–b

2007 – 'Märtulä Maryam', EAe 3 (2007), pp. 801a–802b

Bosc Tiessé, Claire, Derat, Marie-Laure, Fritsch, Emmanuel & Wadi Awad Abullif,

'Les inscriptions arabes, coptes et guèzes des églises de Lalibala', AE 25
(2010), pp. 46–53

Bosworth, Clifford E. (tr.),

The History of al-Tabarī (Ta rikh al-rusul wa'l-mulūk), vol. V. *The Sāsānids, the Byzantines, the Lakhmids, and Yemen*; translated and annotated, State University of New York Press, New York 1999

Breton, Jean-François,

Les bâtisseurs des deux rives de la mer Rouge – Builders across the Red Sea, AE hors-série 5, Centre français des études éthiopiennes – Éditions de Boccard, Paris 2015

Buxton, David,

1946 – 'Ethiopian Rock-hewn Churches', *Antiquity* 20

1947 – 'The Christian antiquities of northern Ethiopia', *Archaeologia* 92, pp. 1–42

1970 – *The Abyssinians*, Thames and Hudson, London

Buxton, David & Matthews, Derek,

'The reconstruction of vanished Aksumite building', *RSE* 25 (1971–72), pp. 53–77

Capuani, Massimo,

Christian Egypt. Coptic Art and Monuments through Two Millennia, The American University in Cairo Press, Cairo 2002

Castanhoso, Miguel,

The Portuguese Expedition to Abyssinia in 1541–1543, as Narrated by Castanhoso, with some Contemporary Letters, the Short Account of Bermudez, and Certain Extracts from Correa, translated and edited by R[ichard] S[tephen] Whiteway, Hakluyt Society, Works, Second Series no. X (London, 1902), rpt. by Kraus Reprint Ltd., Nendeln/Liechtenstein, 1967

Chojnacki, Stanislaw,

'Pittura parietale, icone, manoscritti croci e altri oggetti dell'arredo liturgico', in *Etiopia. Storia, Arte, Cristianesimo*, Jaca Book, Milan 2005, pp. 176–77, figs 138–40

Conti Rossini, Carlo,

1909–10 – *Liber Axumae* (CSCO 54, 58/Aeth. 24, 27), Typogr. Republ. – O. Harrassowitz, Paris & Leipzig, pp. 54–58

1928 – *Storia d'Etiopia* (Africa Italiana. Collezione di Monografie a cura del Ministero delle Colonie, 3), Istituto Italiano d'Arti Grafiche, Bergamo

Curtis, Matthews C.,

'Énda Kaleb', *EAE* 2 (2005), pp. 287a–288a

Curtis, Matthews C. & O'Mahoney, Kevin,

'Agula', *EAE* 1 (2003), pp. 153a–b

De Contenson, Henry,

1961 – 'Les fouilles à Haoulti-Melazo en 1958', *AE* 4, pp. 30–60

1963 – 'Les fouilles à Haoulti en 1959. Rapport préliminaire', *AE* 5, pp. 41–86

de Goeje, Michael Jan (ed.),

'Annales quos scripsit Abu Djafar Mohammed ibn Djarir At-Tabari', *Annales*, prima series vol. 5, Brill, Leiden 1879

Derat, Marie-Laure,

2003 – *Le domaine des rois éthiopiens (1270–1527). Espaces, pouvoir et monachisme*, Publications de la Sorbonne, Paris

2007 – 'Mākanā Īellase', *EAE* 3, pp. 672a–b

2010 – 'Les donations du roi Lālibelā: éléments pour une géographie du royaume chrétien d'Éthiopie au tournant du XII et du XIII siècle', *AE* 25, pp. 46–53

Derat, Marie-Laure & Jouquand, Anne-Marie,

Gabriel. Une église médiévale d'Éthiopie. *AE* hors-série 2, De Boccard – Centre Français des Études Éthiopiennes, Paris 2012

de Roux, Hervé,

'Note sur des tessons cérmiques de Degum, (Tigré)', *AE* 10 (1976), pp. 71–80

Di Salvo, Mario,

1999 – *Chiese d'Etiopia. Il monastero di Narga Īellase*, Skira, Milan

2000 – 'Caratteri e tipologie delle chiese etiopiche: la basilica', in *Archeologia africana* 6, Milano, pp. 51–62

2006 – *Croci d'Etiopia. Il segno della fede: evoluzione e forma*, Skira, Milan

2016 – 'Le rovine delle basiliche aksumite (IV/VII sec.). Un'analisi architettonica', in *Aethiopia fortitudo eius. Studi in onore di Monsignor Osvaldo Raineri in occasione del suo 80° compleanno* (a cura R. Zarzeczny), Pontificio Istituto Orientale, Roma, pp. 181–201

Eigner, Dieter,

'German Archaeological Mission to Eritrea, Season 1996: the ruin 'Littmann no. 8' at Qohaito', *Mare Erythraeum* 3 (1999), pp. 41–56, Staatliches Museum für Völkerkunde, Munich

Evetts, Basil Th. Alfred (ed.),

The Churches and Monasteries of Egypt, and Some Neighbouring Countries, attributed to Abū Sālih, the Armenian. Translated from the original Arabic by B.T.A. Evetts. With added notes by A.J. Butler, Clarendon Press, Oxford 1895

Fattovich, Rodolfo & Munro-Hay, Stuart.

‘Adulis’, *EAE* 1 (2003), pp. 104a–105b

Fauvelle-Aymar, François-Xavier, Bruxelles, Laurent, Mensan, Romain, Bosc-Tiessé, Claire, Derat, Marie-Laure & Fritsch, Emmanuel,

‘Rock-cut stratigraphy: sequencing the Lalibela churches’, *Antiquity* 84 (2010), pp. 1135–50

Fiaccadori, Gianfranco,

‘Énda Maryam’, *EAE* 2 (2005), pp. 289a–290a

Fritsch, Emmanuel,

2012a – ‘Liturgie et architecture ecclésiastique éthiopiennes’, *Journal of Eastern Christian Studies* 64 (1–2), pp. 91–125

2012b – ‘The altar in the Ethiopian Church: history, forms and meaning’, *Journal of Eastern Christian Studies* 12, pp. 443–510

Forthcoming – ‘New reflections of the image of late-antique and medieval Ethiopian liturgy (6th–16th centuries)’

Fritsch, Emmanuel & Derat, Marie-laure,

‘Une lecture architecturale et liturgique des ruines de Gabriel’, *AE hors-série* 2 (2012), pp. 195–204

Fritsch, Emmanuel & Gervers, Michael,

‘Pastophoria and altars: interaction in Ethiopian liturgy and church architecture’, *Aethiopica* 10 (2007), pp. 7–51

Gerdmar, Lars & Olsson, Karl-Gunnar,

Report on Ocular and Technical Examination of Buildings and Paintings at Yemrehanne Krestos, Province of Lasta, Ethiopia, October 2012, The Society for the Conservation of the Ethiopian Cultural Heritage, Addis Ababa 2013

Gerster, Georg,

1970 – *L'arte etiopica. Chiese nella roccia*, Alfieri & Lacroix editore, Settimo Milanese

1974 – *L'Ethiopie. Toit d'Afrique*, Editions Atlantis, Zurich

Gervers, Michael,

2006 – ‘An architectural survey of the church of Ēmäkina Mäddōane ‘Alām (Lasta, Ethiopia)’, *Rocznik Orientalistyczny* 59, zeszyt 1, pp. 92–112, Polska Akademia Nauk, Warsaw

2014 – ‘Churches built in the caves of Lasta (Wällo Province, Ethiopia): a chronology’, *Aethiopica* 17, pp. 25–64

Girma Kidane & Wilding, Richard,

The Ethiopian Cultural Heritage/L'heritage culturel éthiopien, Addis Ababa 1976

Guénon, René,

Le symbolisme de la croix, Les Éditions Vêga, Paris 1983

Heldman, Marilyn E.,

1994 – ‘Early Byzantine Sculptural Fragments from Adulis’, *Actes de la Xe conférence internationale des études éthiopiennes, Paris, 24–28 août 1988*, pp. 239–52, Société française pour les études éthiopiennes, Paris

2003 – ‘Church buildings’, *EAE* 1, pp. 737a–740a

Hirsch, Bertrand & Poissonnier, Bertrand,

‘Recherches historiques et archéologiques à Meshalā Maryam’, *AE XVI* (2000), pp. 59–87

I popoli del mondo. Usi e costumi. Africa, vol. I, Casa Editrice Fancesco Vallardi, Milan 1900

Jouquand, Anne-Marie, Farago-Szekeres, Bernard

& Deresse, Ayenachew,

‘Lieu de culte sur l’amba Gabriel: stèles. Église. Sépultures’, *AE hors-série* 2 (2012), pp. 103–30

Krencker, Daniel,

Ältere Denkmäler Nordabessiniens. Text (Deutsche Aksum-Expedition, 2), Verl. G. Reimer, Berlin 1913

Lepage, Claude,

1971 – ‘Les monuments rupestres de Degum et les églises de vallée’, *Documents pour servir à l’histoire des civilisations éthiopiennes* 2, pp. 61–72

1972a – ‘L’église rupestre de Berakit’, *AE* 9, pp. 147–92

1972b – ‘L’art chrétien d’Éthiopie du Xe au XVe siècle. Premier bilan des missions de 1971 et 1972’, *Compte-rendus des séances de l’année. Académie des Inscriptions et Belles-Lettres* 116e année, no. 3, pp. 495–514, Paris

1972c – ‘Les monuments chrétiens rupestres de Degum en Éthiopie’, *Cahiers archéologiques* 22, pp. 167–200

1973a – ‘Découverte d’un art étonnant: les églises éthiopiennes du X au XVI siècle’, *Archeologia* 64, pp. 45–58, Dijon

1973b – ‘L’église de Zaréma (Éthiopie) découverte en mai 1973 et son rapport à l’histoire de l’architecture éthiopienne’, *Compte-rendus des séances de l’Académie des Inscriptions et Belles-Lettres*, pp. 416–54, Paris

1975 – ‘Le premier art chrétien d’Éthiopie. Les églises’, *Les dossiers de l’archéologie* 8, pp. 34–59, Dijon

1997 – ‘Une origine possible des églises monolithiques de l’Éthiopie ancienne’, *Compte-rendus des séances de l’Académie des Inscriptions et Belles-Lettres* vol. 141, pp. 199–212, Paris

2006 – ‘Entre Aksum et Lalibela: les églises du sud-est du Tigray (IXe-XIIe s.) en Éthiopie’, *Comptes rendus de l’Académie des inscriptions* vol. 150, pp. 9–39, Paris

Lepage, Claude & Mercier, Jacques,

2005 – *Art éthiopien. Les églises historiques du Tigray*, Éditions recherche sur les Civilisations, Paris

2006 – ‘Évolution de l’architecture des églises éthiopiennes du XII au milieu du XV siècle’, *AE* 22, pp. 9–44

2012 – *Lalibela, Wonder of Ethiopia: The Monolithic Churches and their Treasures*, Paul Holberton Publishing, London

Leroy, Jules,

L’Éthiopie. Archéologie et culture, Desclée De Brouwer, Bruges 1973

Lewcock, Ronald,

‘La Cathédrale de Sanaa, foyer du christianisme en Arabie au VIe siècle’, *Dossier de l’Archéologie* 33 (1979, March–April), pp. 80–83, Dijon

Littmann, Erno, Krencker, Daniel & von Lupke, Theodor,

Deutsche Aksum-Expedition: herausgegeben von der Generalverwaltung der Königlichen Museen zu Berlin, 4 vols., Reimer, Berlin 1913

Lusini, Gianfrancesco,

2003 – ‘Aksum: Māshafā Aksum’, *E Ae* 1, pp. 185a–186a

2005 – ‘Hawzen’, *E Ae* 2, pp. 1054a–1055a

Manzo, Andrea,

‘Considerazioni sull’architettura dell’Etiopia antica’, *RSE* 39 (1995) pp. 155–72,

Markham, Clements,

A History of the Abyssinian Expedition, Macmillan, London 1869

Marrassini, Paolo,

Il Gadla Yemrehanna Kristos: introduzione, testo critico, traduzione, Istituto Universitario Orientale, Naples 1995

Matthews, Derek,

‘The restoration of the monastery church of Debra Damo, Ethiopia’, *Antiquity* vol. 23 no. 92 (1949)

Matthews, Derek & Mordini, Antonio,

‘The monastery of Debra Damo, Ethiopia’, *Archaeologia* 97 (1959), pp. 1–58

Miquel, André,

‘Reconnaissance dans le Lasta (décembre 1955)’, *AE* 3 (1959), pp. 131–70

Monneret de Villard, Ugo,

1937 – ‘L’origine dei più antichi tipi di chiese abyssine’, *Atti del 3° Congresso di Studi Coloniali*, vol. IV, pp. 131–51, Florence

1938 – *Aksum. Ricerche di topografia generale* (Analecta Orientalia 16), Pontificium Institutum Biblicum, Rome

Monti della Corte, Alessandro Augusto,

Lalibela. Le chiese ipogee e monolitiche e gli altri monumenti medievali del Lasta, Soc. Italiana Arti Grafiche, Rome, 1940

Mordini, Antonio,

1939 – ‘La chiesa ipogea di Ucrò (Ambà Saneiti) nel Tigrai’, *Gli Annali dell’Africa Italiana* anno II, no. 2, pp. 517–26

1960 – ‘La chiesa di Aramò (con considerazioni sulla datazione di monumenti dell’arte religiosa etiopica)’, in *RSE* 15 (1959), pp. 39–54

Munro-Hay, Stuart,

1989 – *Excavations at Aksum: An Account of Research at the Ancient Ethiopian Capital Directed in 1972–74 by the Late Dr Neville Chittick*, The British Institute in Eastern Africa, London

1991 – *Aksum: An African Civilisation of Late Antiquity*, Edinburgh University Press, Edinburgh

2003 – ‘Aksum Séyon’, *E Ae* 1 (2003), pp. 183b–185a

Nosnitsin, Denis & Derat, Marie-laure,

‘Yékunno Amlak’, *E Ae* 5 (2014), pp. 43b–46b

Pakenham, Thomas,

The Mountains of Rasselas, Weidenfeld and Nicolson, London 1959

Paribeni, Roberto,

‘Ricerche nel luogo dell’antica Adulis (Colonia Eritrea)’, *Monumenti antichi* 18 (1907), col. 437–572

Pascher, Lothar,

‘Gli edifici significativi di 1500 anni’, *Etiopia. Storia, Arte, Cristianesimo*, pp. 45–158, Jaca Book, Milan 2005

Phillipson, David W,

1997 – *The Monuments of Aksum: An Illustrated Account*, Addis Ababa University Press and British Institute in Eastern Africa, Addis Ababa & London

1998 – *Ancient Ethiopia: Aksum, its Antecedents and Successors*, British Museum Press, London

2009 – *Ancient Churches of Ethiopia: Fourth–Fourteenth Century*, Yale University Press, New Haven & London

Pianavia Vivaldi, Rosalia,

Tre anni in Eritrea. Tip. Ed. L. F. Cogliati, Milan, 1901

Plant, Ruth,

Architecture of the Tigre, Ethiopia, Ravens Educational and Development Services, Worcester, 1985

Sauter, Roger,

1963 – ‘Où en est notre connaissance des églises rupestres d’Éthiopie’, *AE* 5, pp. 235–92

1967–68 – ‘L’arc et les panneaux sculptés de la vieille église d’Asmara’, *RSE* 23, pp. 220–31

1976 – ‘Églises rupestres au Tigré’, *AE* 10, pp. 157–75

Smidt, Wolbert,

‘Dängolo’, *E Ae* 2 (2005), pp. 87b–88b

Tekle Hagos,

2008 – *Archaeological Rescue Excavations at Aksum, 2005–2007*, The Ethiopian Cultural Heritage Project, Addis Ababa

2011 – ‘Archaeological excavations at the Church of Arbaetu Ensessa, Aksum, Ethiopia, 2006–2007’, *AE* 26, pp. 79–98

Testini, Pasquale,

Archeologia Cristiana. Nozioni generali dalle origini alla fine del secolo VI. Propedeutica, topografia cimiteriale, epigrafia, edifici di culto, Desclée & C. Editori Pontifici, Rome & Paris [1958]; repr. Edipuglia, Bari 1980

Tewelde Medhin, Joseph (abba),

‘Introduction générale aux églises monolithes du Tigray’. *Proceedings of the Third International Conference of Ethiopian Studies*, 1 (1966), pp. 83–98, Institute of Ethiopian Studies, Addis Ababa

The Illustrated London News, London, 1868

Tzegay Berhe, G. Libanos,

‘Däbrä. Damo’, *E Ae* 2 (2005), pp. 17b–20b

Vantini, Giovanni,

Il Cristianesimo nella Nubia antica, EMI, Bologna, 1985

Vigoni, Pippo,

Abissinia. Giornale di un viaggio, Ulrico Hoepli, Milan, 1881

